# U. S. ARMY
# JUMPMASTER SCHOOL
## STUDENT STUDY GUIDE

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# TABLE OF CONENTS

**Duties and Responsibilities of the Jumpmaster and Safety** **Page 5-10**

**FM 3-21.220 Chapters 7-10**

Prerequisites required to perform duties as a Jumpmaster or Safety. Duties and Responsibilities from the time of notification through completion of the Airborne Operation.

**T-10 Personnel Parachutes** **Page 11-23**

**FM 3-21.220 Chapter 2**

Proper nomenclature, rated capacities, tensile strengths, materials and dimensions of the T-10D main parachute and the Modified Reserve Parachute System Soft Loop Center Pull.

**Army Aircraft** **Page 25- 27**

**FM 3-21.220 Chapter 17**

Characteristics, capabilities, safety considerations and jump procedures for the UH-60A Blackhawk and the CH-47 Chinook.

**Individual Equipment Containers** **Page 29-32**

**FM 3-21.220 Chapters 2 & 12**

Proper nomenclatures, characteristics, correct rigging, attaching and lowering procedures for the M1950 Weapons Case, AT-4JP and Alice Pack with Harness Single Point Release, the assembly of the ballistic helmet and Advanced Combat Helmet.

**Air Force Aircraft** **Page 33- 37**

**FM 3-21.220 Chapter 16**

Characteristics, seating arrangements and in-flight rigging procedures for the C-130 Hercules and C-17 Globemaster Aircraft.

**T-11 Personnel Parachutes** **Page 39- 48**

Proper nomenclatures, rated capacities, tensile strengths, materials and dimensions of the T-11 main parachute and the T-11 reserve parachute system.

**Duties and Responsibilities of the DZSO and the DZSTL** **Page 49- 56**

**FM 3-21.220 Chapters 7 & 20-23**

Prerequisites to perform duties as DZSO/ DZSTL Specific duties and responsibilities, personnel and support requirements. Drop zone surveys, tactical assessment of a drop zone and how to score Air Force drops.

**CARP Drop Zones** **Page 57- 63**

**FM 3-21.220 Chapters 20-23 and AFI 13-217**

Determine the minimum size requirements for a CARP drop zone, location of the control center and how to temporarily cease an airborne operation.

**"A" Series Containers** **Page 65- 67**

**FM 3-21.220 Chapter 14**

Proper nomenclature, characteristics, proper rigging procedures and rigging of the A-21 cargo bag and A-7A cargo sling.

**Practical Work in the Aircraft (PWAC)** **Page 69- 72**

**FM 3-21.220 Chapters 5, 10 & 16**

Proper sequence of jump commands and time warnings with their appropriate hand and arm signals. Door procedures and door bundle ejection procedures.

**T-10 Hollywood JMPI Sequence Talk Through** **Page 73- 79**

**T-10 Combat Equipment JMPI Sequence Talk Through** **Page 81- 83**

**T-11 Hollywood and Combat JMPI Sequence Talk Through** **Page 85- 92**

# Duties and Responsibilities of the Jumpmaster and Safety

# FM 3-21.220 Chapter 7-10

**KEY PERSONNEL PREREQUISITES**

The initial training and follow-on refresher training of key personnel are of major concern to commanders. The proper training and supervision of key personnel ensure that correct procedures and operational safety measures are followed during airborne operations.

**PRIMARY JUMPMASTER**

- Be a commissioned officer, warrant officer, or NCO (E5 or above), USMC Cpl, or USAF SRA
- Be JM qualified. The JM must be a graduate from an authorized JM course at Fort Benning, GA or Fort Bragg, NC, a JM MTT, or, from a SOC JM course. (JMs qualified through SOC JM course must undergo JM refresher training prior to assuming JM duties outside SOC units.)
- Be a current jumper and JM current. The JM must have performed JM duties within the past 180 days on a USAF aircraft; or, if a senior- or master-rated parachutist, performed safety duties on a USAF aircraft within the past 180 days; or completed a JM refresher course within the past 180 days. (JM or safety duties performed on Army rotary-wing aircraft do not apply for JM currency)
- Perform AJM duties twice and safety duties twice

**ASSISTANT JUMPMASTER**

- Be a commissioned officer, warrant officer, or NCO (E5 or above), USMC Cpl, or USAF SRA
- Be JM qualified and current
- Perform safety duties twice

**SAFETY PERSONNEL**

- Be a commissioned officer, warrant officer, or NCO (E5 or above), USMC Cpl, or USAF SRA
- Be JM qualified and current

**JUMPMASTER DUTIES AT THE UNIT AREA**

The success of airborne operations depends mainly on how well the PJM executes their duties. They must receive mission briefings, conduct pre-jump training, supervise rigging of equipment, and move to the departure airfield, all within a rigid time schedule.

Upon notification that they have been designated as PJM, the individual obtains or is provided the following information:

- Names of AJM(s) and safety personnel, and time and place to brief them
- Time and place of initial manifest call
- Time and place of final manifest call
- Time and place to inspect ballistic helmets, ID tags, and Id cards
- Time and place to conduct operations briefing and pre-jump training
- Time and place to inspect parachutists' uniforms and equipment
- Time and plan for transportation from unit to departure airfield
- Tactical cross-load plan
- Time and place of parachute issue and types of parachutes
- Weather decision time(s)
- Time and place of troop safety briefing
- Type of aircraft for the operation and special items of equipment being worn by jumpers (AT-4JP, DMJP, SMJP) or A-series containers aboard aircraft (door bundles or wedge)
- Aircraft tail numbers, chalk numbers, and parking spots
- Time and place of JM/aircrew briefing
- Load time
- Station time (*CRITICAL)*

- Takeoff time
- Air movement plan, including time of flight, formations, route, direction of flight over drop zone, drop altitude, location and design of code letter, racetracks, and emergency call signs/frequencies
- Landing plan, including drop zone, drop times, delivery sequence, number/types of loads (PE, HE, CDS), and type of drop (CARP, VIRS, GMRS)
- Mission and ground tactical plan
- Air item turn-in plan
- Medical support plan

**OPERATIONS BRIEF**

Immediately following final manifest call, the PJM briefs personnel on the details of the operation. Pre-jump training, along with mock door training, is performed after the operations briefing and is conducted at the unit area or the departure airfield. It should be scheduled no sooner than 24 hours before takeoff and include the following:

- Drop zone
- Type of aircraft
- Chalk number(s)
- Type of parachute(s)
- Briefing on serials, container delivery system, heavy drop, and type of aircraft, if a part of a larger airborne operation
- Weather decision time (for GO/NO-GO)
- Type of individual equipment and special items of equipment that troops will be jumping (ALICE pack, AT-4JP, DMJP, SMJP, M1950 weapons case)
- Time and place of parachute issue
- Load time
- Station time
- Takeoff time
- Length of flight
- In-flight emergencies
- Direction of flight over drop zone
- Route checkpoints
- Predicted winds on the drop zone and direction
- Drop zone assembly aids and area
- Parachute turn-in point(s)
- Time and place of final manifest call
- Medical support plan
- Obstacles on or near the DZ

**JUMPMASTER AND SAFETY DUTIES AT THE DEPARTURE AIRFIELD**

Time is a critical factor at the departure airfield. The following events occur at the same time to allow the unit to meet station time:

- Departure Airfield Control Officer (DACO)/PJM update briefing
- JM aircraft inspection and coordination with aircrew
- Control of parachute issue by AJM/safeties
- Rigging/inspection of parachutists
- Loading of aircraft

The PJM usually turns control of the chalk(s) over to the AJM and safeties while accomplishing update briefings and aircrew coordination. The AJM and safeties control parachute issue and prepare for rigging/inspection of the chalk.

**PJM/DACO BRIEFING**

Upon arrival at the airfield, the PJM reports to the DACO for an update briefing to include:

- Change in the station time
- Change in the overall operations plan
- Current weather and winds
- Parking plan of aircraft (location and tail number of the assigned aircraft)
- Coordination with the USAF guide if wheeled vehicles are used for transport to aircraft

**PJM/AIRCREW INITIAL COORDINATION**

After DACO coordination, the PJM should proceed to the aircraft for initial coordination. Normally, the aircraft is open with a crew member on board one hour before station time. Items to be discussed, verified, or agreed to include:

- Aircraft configuration IAW the unit mission
- Control of the jump doors

**AIRCRAFT INSPECTION**

A member of the JM team, usually a safety, accompanied by a crew member, usually a USAF loadmaster, inspects the aircraft and coordinates any activities related to the airborne operation. A member of the JM team must check the exterior and interior portions of the aircraft directly related to the airborne operation. While the aircraft is being inspected, a member of the JM team controls the chalk, making sure personnel remain in assigned sticks and are accounted for at all times.

**PARACHUTE ISSUE**

AJM/safety personnel supervise the chalk during parachute and air item issue. AJM/safety personnel ensure that all parachutists use the buddy system when donning parachutes and equipment. Personnel should not start donning parachutes and equipment earlier than one hour before load time to avoid unnecessary time in the harness.

The AJM/safety will draw:

- Extra aviator's kit bags (1 per 15 jumpers)
  - The extra aviator's kit bags are used to store the static lines and deployment bags after the jump. The extra aviator's kit bags are placed in or with the safety kit.
- At least two extra reserve parachutes

**FINAL DACO COORDINATION**

If directed by the PJM, AJM/safety personnel report to the DACO for any special or last-minute instructions that must be relayed to the PJM.

**JMPI**

AJM/safety personnel assist in rigging, inspecting, and correcting deficiencies as directed by the PJM. The PJM will supervise if the schedule permits.

**MOVEMENT TO THE AIRFIELD**

After personnel inspection, safety personnel load the parachutists aboard the aircraft. Load time is the time agreed on by the Army and Air Force for loading the aircraft. Station time is the time the aircrew, parachutists, and equipment are inside the aircraft and are prepared for takeoff, with everyone seat-belted and ballistic/advanced combat helmets on.

**AIRFIELD MOVEMENT PROCEDURES**

These procedures must be followed when moving parachutists on or across an active airfield.

- Coordinate with DACO for permission to cross airfield
- Keep parachutists in closed formation
- Cross active runways only at authorized crossing points
- Cross only on light signals from airfield control tower
  - Green: Go
  - Red: Stop, do not proceed

        - Flashing Red: Clear taxi strips and runways
        - Flashing Red And Green: Emergency warning, be alert
        - Flashing White: Return to start point
    - Display checkered flags on the first and last escort vehicles
    - Keep vehicles in low gear while crossing runways
    - Do not raise radio antennas within 50 feet of any aircraft
    - Do not smoke in the vicinity of any aircraft
    - Avoid aircraft propellers
    - Avoid jet engine intakes/exhausts. Stay about 50 feet from intakes and 200 feet from exhausts

**LOADING THE AIRCRAFT**

Parachutists are loaded in the aircraft in reverse chalk order. During loading, safety personnel move forward in the aircraft ahead of the chalk and supervise seating of the chalk to ensure that all seats are filled, seat belts are fastened, and that personnel are in proper stick order. They also assist in loading equipment aboard the aircraft. The aircrew briefing (to the jumpers) may be given before or after loading the aircraft but must be completed before takeoff.

**PILOT/ LOADMASTER/ JUMPMASTER BRIEFING**

- INTRODUCE THE JUMPMASTER TEAM
- CONFIRM CRITICAL INFORMATION:
    - Station time
    - Take-off time
    - Drop time
    - Number and length of race tracks
    - Type of exit: Mass exit, ADEPT 1, or ADEPT 2
- DZ INFORMATION:
    - Name of DZ
    - DZ identification
    - Drop heading
    - Drop altitude
    - Drop speed
    - Seconds of green light
    - Type parachute
    - Current weather on DZ
    - Location of CARP
    - View air route plan
    - Method of control (CCT/DZST)
    - Parachutists (Total and number per pass)
- EMERGENCY PROCEDURES:
    - Ground (All commands from loadmaster)
    - Emergency landing signals
    - Emergency exit signals
    - Towed parachutist procedures:
        - Static line/equipment
        - Identify cutter (loadmaster for static line/jumpmaster for equipment)
    - Time warnings:
        - 20 minutes, 10 minutes, 1 minute
        - Request a 30-second *time advisory*, if desired
    - Control of paratroop doors between passes and red light procedures

- Raising of seats
- Retrieval of deployment bags
- Remind loadmaster to keep jumpmaster informed of any changes

- Insist Loadmaster give troop safety briefing and include the following:
  - Load jettison
  - Fuselage fire
  - Abandon aircraft
  - Emergency bail out
  - Crash landing
  - Ditching
  - Rapid depressurization procedures
  - Towed parachutist procedures
  - Malfunctions
- IN-FLIGHT EMERGENCY PROCEDURES

  Brief jumpers in accordance with FM 3-21.220 page 9-25 table 9-1
  - CRASH LANDING ON TAKE OFF
    - Continuous ringing of alarm or oral warning
    - USAF Aircraft: remain seated until aircraft stops then exit
    - Army Aircraft: remain inside aircraft, pull legs up and cover head
  - CRASH LANDING DURING FLIGHT
    - Six short rings or oral signal
    - USAF Aircraft: Time permitted jump, if not brace for impact on continuous ring then exit
    - Army Aircraft: As direct by pilot
  - EMERGENCY BAILOUT
    - Three short rings or oral signal
    - USAF Aircraft: Stand up, hook up, exit under direction of PJM
    - Army Aircraft: Exit aircraft under direction of PJM
  - DITCHING OVER WATER WITH INSUFFICIENT DROP ALTITUDE
    - Six short rings and oral warning
    - USAF Aircraft: Use available padding, remain seated and brace for impact
    - Army Aircraft: Remain inside aircraft, pull legs in and cover head
  - LIGHTEN LOAD
    - Oral warning
    - USAF Aircraft: Assist PJM/ Loadmaster in jettisoning equipment
    - Army Aircraft: As directed by pilot
  - FIRE IN FLIGHT
    - Oral warning
    - USAF Aircraft: Move from area, extinguish fire
    - Army Aircraft: As directed by pilot

**JUMPMASTER AND SAFETY DUTIES IN FLIGHT**

After takeoff, the PJM must remain oriented at all times and keep the parachutists informed of any deviations from the flight plan. He may coordinate with the navigator or use strip maps and checkpoints. He also remains in communication with the pilot. This is done by relaying through the loadmaster, over the interphone. On Army aircraft, the JM/safety should wear a flight helmet or headset for direct communication with the pilot and to monitor the ground control element. If the JM/safety cannot wear a flight helmet or headset, communication can be made through the crew chief.

**JUMPMASTER DUTIES IN FLIGHT**

- Enforce flight rules and regulations

- Issue time warnings
- Issue jump commands
- Perform door safety checks
- Perform outside air safety checks
- Control exit of all parachutists
- Maintain visual on jump caution lights
- Observe for any unsafe conditions that may occur
- Eject door bundles
- Perform in-flight rigging mission

**GENERAL RULES TO STRESS:**

- DO NOT sacrifice safety for any reason
- Rehearse jumpmaster procedures on the ground
- Hook up before opening jump doors or ramp
- Face open jump door or tailgate when in flight
- Maintain firm handhold on aircraft when working in/near open jump door or ramp
- Not allow anyone in/near open jump door without ballistic helmet, or equivalent, and safety harness or parachute

**SAFETY PERSONNEL**

- During flight, safety personnel constantly monitor the condition of all parachutists and distribute air sickness bags where needed
- They also assist the PJM in relocating personnel who are too sick to jump or jump refusals. Jump refusals are given a direct order not to touch their equipment. Safety personnel then move the parachutist forward in the cargo compartment to be seated.
- During in-flight rigging missions, safety personnel assist in parachute issue. They also operate rigging, JMPI, and correction stations, as directed by the PJM.
- **The safety controls the jumpmaster's static line during jump commands.**
- Safeties must be alert for and correct any excess webbing or loose hook pile tape lowering lines
- Once they have checked the last parachutist, and after the command HOOK UP, they return to the aft end of the aircraft. While moving to the aft end, safeties check each jumper's universal static line for proper routing from its point of attachment, at the anchor line cable, to the first stow.
- They position themselves near the trail edge of the jump door and control the static line for the JM as he performs the door safety check and outside air safety check.
- Safety personnel take static lines with the lead hand, pass them to the trail hand, and control them until parachutists exit
- Safety personnel take static lines while the JM controls the flow of parachutists
- After all parachutists have exited the aircraft, the PJM and AJM hand off their static lines to the safeties and exit the aircraft
- After all parachutists have exited, including PJM and AJM, the safety visually clears to the rear of the jump door, then gives the USAF loadmaster a thumbs-up signal and an oral "YOUR DOOR, AIR FORCE." This indicates that all parachutists are free and clear of the aircraft.
- Safety personnel and the loadmaster retrieve the deployment bags
- Once the deployment bags are inside the aircraft, safety personnel detach the static lines and store them in the extra aviator's kit bags
- On return to the departure airfield, safety personnel turn in all air items left on board the aircraft to the storage facility (obtain a receipt). They also turn over any unit or personal equipment left aboard the aircraft to the DACO, as well as all personnel who did not jump.

# T-10 PERSONNEL PARACHUTES

# FM 3-21.220 Chapter 2

**T10-D MAIN PARACHUTE**

The T-10 series parachute is used during static line airborne operations. The T-10 series is a non-steerable canopy.

WEIGHT
- Approx. 28-31 lbs.

DIAMETER
- Nominal: 35 feet
- Skirt: 30 feet
- Parabolic in shape

SAFE DROP SPEEDS
- 150 knots Maximum
- 50 knots Minimum

AVG. DEPLOYMENT TIME
- 3.2 seconds

RATE OF DECENT
- 18-22 feet per second

The main parachute consists of five major components:

1) Deployment bag
2) Canopy assembly
3) Riser assembly
4) Harness assembly
5) Pack tray

**DEPLOYMENT BAG**

MATERIAL
- Cotton sateen cloth

WEIGHT
- 8.5 ounces per square yard

DIMENSIONS WHEN PACKED
- 18 inches long
- 12 inches wide
- 5 inches deep

**UNIVERSAL STATIC LINE SNAP HOOK**

Universal static lines point of attachment to the aircraft's anchor line cable. It consists of a dual locking spring opening gate with a Rivet pin located center mass.

MATERIAL
- Chromium Molybdenum

RATED CAPCITY
- 1,750 lbs.

**UNIVERSAL STATIC LINE**

The universal static line is girth hitched to the deployment bag and girth hitched to the narrow portion of the universal static line snap hook.

LENGTH
- Approx. 15 feet

MATERIAL
- ¾ inch, tube edge, type 6.6 nylon webbing

TENSILE STRENGTH
- 4,000 lbs.

**PACK OPENING LOOP**

The pack opening loop is located approximately 12 feet from the upper portion of the Universal static line. The pack opening loop breaks the pack-closing tie during the parachutes deployment phase.

MATERIAL
- Type XII nylon webbing

TENSILE STRENGTH
- 1,200 lbs.

**STATIC LINE SLEEVE**

The static line sleeve prevents nylon-to-nylon contact between the universal static line and the pack tray. There is a 4 inch slit to expose the blue Strata mark.

LENGTH
- Approx. 27 inches

MATERIAL
- Cotton duck material

**BUFFER LOOP**

The buffer loop is sewn into the lower portion of the Universal Static Line. It prevents nylon-to-nylon contact between the Universal Static Line and the Deployment bag.

MATERIAL
- Cotton duck material

**BREAK CORD TIE**

The break cord tie serves as point of attachment between the deployment bag and the Canopy assembly.

LENGTH
- Approx. 36 inches

MATERIAL
- ¼ inch cotton webbing

**SUSPENSION LINE PROTECTIVE FLAP**

The suspension line protective flap prevents nylon to nylon contact between the suspension lines and the pack tray.

**CONNECTOR LINK TIES**

The deployment bags point of attachment to the L-bar connector links on the riser assemblies.

LENGTH
- Approx. 14 inches

MATERIAL
- ¼ inch cotton webbing

**BRIDLE LOOP**

The bridle loop is located at the uppermost portion of the canopy assembly. It is held center of mass by the apex centering lines.

LENGTH
- Approx. 3 inches in diameter

MATERIAL
- Type VIII nylon webbing

TENSILE STRENGTH
- 3,600 lbs.

**APEX CENTERING LINES**

There are 2 apex centering lines. They hold the bridle loop center of mass on the canopy and are sewn to 2 of the vent lines.

LENGTH
- Approx. 9 inches

MATERIAL
- Type II nylon cord

TENSILE STRENGTH
- 400 lbs.

**VENT LINES**

There are 15 vent lines.

LENGTH
- Approx. 27 inches

MATERIAL

- Type II nylon cord

TENSILE STRENGTH

- 400 lbs.

**UPPER LATERAL BAND**

The upper lateral band is the strongest component on the canopy assembly.

MATERIAL

- 1 inch wide tubular nylon webbing

TENSILE STRENGTH

- 4000 lbs.

**MAIN CANOPY**

MATERIAL

- Type I rip stop nylon

WEIGHT

- Approx. 1.1 ounces per square yard

**RADIAL TAPES**

There are 30 radial tapes which form the frame work and separate the wedge shape gores. There are 30 wedge shape gores, which are further subdivided by 4 to 5 diagonally stitched sections.

MATERIAL

- $9/16^{th}$ inch nylon tape

TENSILE STRENGTH

- 500 lbs.

**LOWER LATERAL BAND**

The lower lateral band is located approximately 17 ½ feet from the upper lateral band.

MATERIAL

- 1 inch wide tubular nylon tape

TENSILE STRENGTH

- 525 lbs.

**POCKET BANDS**

There are 15 pocket bands which are attached to the lower lateral band.

MATERIAL

- 1 inch wide tubular nylon tape

TENSILE STRENGTH

- 525 lbs.

**ANTI-INVERSION NET**

The anti-inversion is attached to the lower lateral band and extending approximately 18 inches below. It reduces the chances of a complete or semi- inversion of the canopy.

MATERIAL

- Knotless braided nylon cord

**SUSPENSION LINES**

LENGTH

- Approx. 27 feet

MATERIAL

- Type II nylon cord

TENSILE STRENGTH

- 400 lbs.

**L-BAR CONNECTOR LINKS**

There are 2 L-bar connector links on the right riser set and 2 on the left riser set. There are 7 suspension lines attached to each front L-bar connector link and 8 on each rear L-bar connector link.

MATERIAL

- Cadmium plated forged steel alloy

RATED CAPACITY
- 3000 lbs.

**RISERS**

LENGTH
- Approx. 30 inches

MATERIAL
- Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**MALE FITTING CANOPY RELEASE ASSEMBLY**

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**FEMALE FITTING CANOPY RELEASE ASSEMBLY**

The grove of the male fitting canopy release assembly sits on the grove of the female fitting canopy release assembly.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**CANOPY RELEASE ASSEMBLY**

When completely assembled the rated capacity is 5000 lbs.

**LATCH**

The latch is utilized to secure the male fitting canopy release assembly to the female fitting canopy release assembly.

**CABLE LOOP**

The cable loop is what the jumper places his or her thumb through to recover from the drag.

MATERIAL
- Flexible stainless steel aircraft cable

RATED CAPACITY
- 920 lbs.

**SAFETY CLIP**

The safety clip serves 2 purposes, to secure the cable loop inside the canopy release assembly and to prevent foreign material from entering the canopy release assembly.

**CANOPY RELEASE ASSEMBLY PAD**

The canopy release assembly pad is an added comfort feature and does not have to be present for the parachute harness to be serviceable. It is located under the canopy release assembly and the main lift web.

**MAIN LIFT WEB**

Starting approximately 5 inches above the canopy release assembly and extending approximately 6 inches below the D-ring.

MATERIAL
- 2 plies of Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**CHEST STRAP**

The chest strap is sewn to the left main lift web.

LENGTH
- Approx. 13 inches

MATERIAL
- Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**WEBBING RETAINER**

One webbing retainer is attached to the chest strap. It can be replaced by a retainer band if it is not present or serviceable.

MATERIAL
- Type I elastic webbing

**QUICK FIT V-RING**

One quick fit V-ring is located at the end of the chest strap. Attaches to the ejector snap located on the right main lift web. It is one of the five points of adjustment on the parachute harness.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**EJECTOR SNAP**

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

The ejector snap consists of three sub components, they are:

1) ACTIVATING LEVER
2) BALL DETENT
3) OPENING GATE

**EJECTOR SNAP PAD**

One ejector snap pad is located under the chest strap ejector snap. This is an added comfort feature and does not have to be present for the parachute harness to be serviceable.

**D-RINGS**

The D-rings serve as points of attachment for the reserve parachute and any other items of combat equipment.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 5000 lbs.

**TRIANGLE LINKS**

The triangle links serve as points of attachment for the ejector snap of the hook pile tape lower line. They are located just below the D-rings on the harness assembly.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 1000 lbs.

**SADDLE**

Continuation of the main lift web and routed under the jumpers buttocks.

MATERIAL
- Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**LEG STRAPS**

The leg straps are sewn midway through the saddle.

LENGTH
- Approx. 27 inches

MATERIAL
- Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**WEBBING RETAINER**

One webbing retainer is attached to each leg strap. They can be replaced by a retainer band if they are not present or serviceable.

MATERIAL
- Type I elastic webbing

**QUICK FIT V-RING**

One quick fit V-ring is located at the end of each leg strap. They are attached to the appropriate ejector snap located on the harness assembly just below the triangle links. They serve as 2 more points of adjustment on the parachute harness.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**EJECTOR SNAP PAD**

One ejector snap pad is located under each leg strap ejector snap. These are an added comfort feature and do not have to be present for the parachute harness to be serviceable.

**DIAGONAL BACK STRAPS**

The diagonal back straps form an "X" across the jumpers back. They can be sized in six sizes: small, 1 through 4 and large.

MATERIAL
- Two plies of Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**BACK STRAP ADJUSTERS**

The back strap adjusters are located at the end of each diagonal back strap.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**HORIZONTAL BACK STRAP**

The horizontal back strap is routed through the lower portion of the back strap adjuster, through the main lift web, across the small of the jumpers back, through the opposite main lift web and terminates at the opposite back strap adjuster. It serves as 2 more points of adjustment on the parachute harness.

LENGTH
- Approx. 75 inches

MATERIAL
- Type XIII nylon webbing

TENSILE STRENGTH
- 6500 lbs.

**DIAGONAL BACK STRAP RETAINERS**

The diagonal back strap retainers are sewn to the upper portion of the pack tray.

LENGTH
- Approx. 5 ½ inches

MATERIAL
- Type VI nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**DIAGONAL BACK STRAP KEEPERS**

The diagonal back strap keepers are sewn to the upper portion of the pack tray.

LENGTH

- Approx. 6 inches

MATERIAL

- Type XVII nylon webbing

TENSILE STRENGTH

- 2500 lbs.

**HORIZONTAL BACK STRAP RETAINERS**

The horizontal back strap retainers are sewn to the lower portion of the pack tray.

LENGTH

- Approx. 5 ½ inches

MATERIAL

- Type VI nylon webbing

TENSILE STRENGTH

- 2500 lbs.

**HORIZONTAL BACK STRAP KEEPER**

The horizontal back strap keeper is sewn to the lower portion of the pack tray.

LENGTH

- Approx. 12 inches

MATERIAL

- Type XVII nylon webbing

TENSILE STRENGTH

- 2500 lbs.

**WAISTBAND**

The waist band is sewn to the bottom right corner of the pack tray. During inspection you must insure that at least 50% of one row of stitching is present securing the waistband to the pack tray or the parachute harness is unserviceable.

LENGTH

- Approx. 43 inches

MATERIAL

- Type VIII nylon webbing

TENSILE STRENGTH

- 3600 lbs.

**WAISTBAND ADJUSTER PANEL**

The waistband adjuster panel is sewn to the bottom left corner of the pack tray. It consists of a nylon portion and the metal adjuster. During inspection you must insure that at least 50% of one row of stitching is present securing the waistband adjuster panel to the pack tray or the parachute harness is unserviceable.

NYLON PORTION

MATERIAL

- Type VIII nylon webbing

TENSILE STRENGTH

- 3600 lbs.

**METAL ADJUSTER**

MATERIAL

- Cadmium plated forged steel alloy

RATED CAPACITY

- 1000 lbs.

**PACK CLOSING FLAPS**

The pack closing flaps form the top, bottom, left and right portions of the pack tray.

MATERIAL
- Nylon duck material

WEIGHT
- Approx. 7.25 ounces per square yard

**STATIC LINE SLACK RETAINER**

The static line slack retainer is sewn to the top pack closing flap. It cannot be cut, torn or frayed more than 50% or the entire parachute is unserviceable.

MATERIAL
- Type I elastic webbing

**OUTER STATIC LINE STOW BARS**

The outer static line stow bars are sewn to the left and right pack closing flaps.

MATERIAL
- Type IV nylon webbing

TENSILE STRENGTH
- 1000 lbs.

**INNER STATIC LINE STOW BARS**

The inner static line stow bars are sewn to the left and right pack closing flaps.

MATERIAL
- Type III nylon webbing

TENSILE STRENGTH
- 800 lbs.

**PACK CLOSING LOOPS**

The pack closing loops are sewn to all four pack closing flaps. They cannot be cut, torn or frayed more than 50% at the looped portion or the entire parachute is unserviceable.

MATERIAL
- Type IV nylon webbing

TENSILE STRENGTH
- 1000 lbs.

**PACK CLOSING TIE**

The pack closing tie is routed through all four pack closing loops and the pack opening loop. It must be located in the 3 to 6 o'clock location.

LENGTH
- A sufficient amount

MATERIAL
- ¼ inch cotton webbing

**MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM SOFT LOOP CENTER PULL (MIRPS SLCP)**

The MIRPS SLCP is a troop chest, emergency type parachute. It has been designed for manual activation in the event of a malfunction of the main parachute.

WEIGHT
- Approx. 12 – 15 lbs.

DIAMETER
- Approx. 24 feet
- Flat circular in shape

The MIRPS SLCP consists of four major components:

1) Pilot parachute with Deployment Assistance Device
2) Canopy Assembly
3) Pack Assembly
4) Ripcord Assembly

**DEPLOYMENT ASSISTANCE DEVICE**

The deployment assistance device consists of a 30 inch helical spring encased in type I marquisette netting.

MATERIAL
- Type I marquisette netting

WEIGHT
- Approx. 1.1 ounces per square yard

**END CAPS**

The end caps are located at both ends of the deployment assistance device.

MATERIAL
- Nylon cordura

WEIGHT
- Approx. 10 ounces per square yard

**GROMMETS**

There are 4 grommets located on one end cap. They are utilized to hold the deployment assistance device in a compressed position during packing.

MATERIAL
- Hard brass

**GROMMET TABS**

The grommet tabs secure the grommets to the end cap.

MATERIAL
- ¾ inch Type III nylon tape

TENSILE STRENGTH
- 400 lbs.

**PILOT PARACHUTE**

MATERIAL
- Low porosity parachute cloth

WEIGHT
- Approx. 1.1 ounces per square yard

DIAMETER
- Approx. 60 inches
- Flat circular in shape

**MARQUISETTE NETTING**

There is marquisette netting attached to the skirt of the pilot parachute. It helps prevent foreign material from entangling with the pilot parachute.

LENGTH
- Approx. 27 inches

MATERIAL
- Type I marquisette netting

WEIGHT
- Approx. 1.1 ounces per square yard

**RADIAL TAPES**

The radial tapes are attached to the skirt of the pilot parachute. There are 6 radial tapes or 3 continuous. They serve as point of attachment for the bridle line.

MATERIAL
- ½ inch wide Type III nylon tape

TENSILE STRENGTH
- 250 lbs.

**BRIDLE LINE**

The bridle line is girth hitched to the radial tapes. It serves as point of attachment between the pilot parachute and the canopy assembly. Located at the end of the bridle line is the bridle loop. The bridle loop is girth hitched to the vent lines.

LENGTH
- Approx. 13 feet

MATERIAL
- 2 inch wide polyester nylon webbing

TENSILE STRENGTH
- 1750 lbs.

**DEPLOYMENT WEIGHT**

The deployment weight is located at the uppermost portion of the bridle line. It provides positive launch of the pilot parachute.

MATERIAL
- 5 ounces of lead

**RUBBER SHEATH**

The rubber sheath encases the deployment weight to prevent damage to the pilot parachute during deployment.

**STAGING FLAP HOOKS**

The staging flap hooks are located approximately 10 feet from the deployment weight. They are utilized to secure the staging flaps inside of the pack assembly.

MATERIAL
- Stainless steel held in place by 3/8 inch wide Type III nylon tape

TENSILE STRENGTH
- 200 lbs

**APEX SOCK**

The apex sock aids in inflation of the canopy assembly during low speed deployments.

MATERIAL
- Cotton sateen cloth

WEIGHT
- Approx. 8.5 ounces per square yard

**UPPER LATERAL BAND**

The upper lateral band is the strongest component of the canopy assembly.

MATERIAL
- 1 inch wide tubular nylon webbing

TENSILE STRENGTH
- 4000 lbs.

**RESERVE CANOPY**

MATERIAL
- Type I rip stop nylon

WEIGHT
- Approx. 1.1 ounces per square yard

**RADIAL SEAMS**

There are 24 radial seams which form the frame work and separate the wedge shape gores. There are 24 wedge shape gores, which are further subdivided by 3 to 4 diagonally stitched sections. The radial seams provide channels for the suspension lines.

**LOWER LATERAL BAND**

The lower lateral band is located approximately 10 feet from the upper lateral band.

MATERIAL
- 1 inch wide tubular nylon tape

TENSILE STRENGTH
- 525 lbs

**SUSPENSION LINES**

The suspension lines are attached a connector snap on the pack assembly, routed up through the framework of the canopy across the apex (forming the vent lines), through the opposite framework and attach to the opposite connector snap.

LENGTH
- Approx. 20 feet from the connector snap the lower lateral band

MATERIAL
- Type III nylon cord

TENSILE STRENGTH
- 550 lbs.

**CONNECTOR SNAPS**

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 5000 lbs.

**CONNECTOR SNAP TIES**

The connector snap ties secure the connector snaps to the pack assembly. They are routed through the **connector snap grommets.**

LENGTH
- Approx. 8 inches

MATERIAL
- Type II or Type III nylon cord gutted

**TOP CARRYING HANDLE**

The top carrying handle aids the jumper in carrying the reserve parachute around the departure air field**.**

MATERIAL
- Type VI nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**WAISTBAND RETAINERS**

The waistband retainers are a continuation of the top carrying handle. The waistband is routed behind both waistband retainers keeping the reserve snug to the jumper's body.

MATERIAL
- Type VI nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**LEFT CARRYING HANDLE**

The left carrying handle aids the jumper in activating the reserve parachute in the event of a malfunction.

MATERIAL
- Type VI nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**PACK OPENING SPRING BANDS**

The pack opening spring bands aid in the deployment of the reserve parachute. There is one pack opening spring band running horizontal and two running vertically. Each pack opening spring band has a **hook** attached to it. The hook attaches to an **eyelet**.

LENGTH
- Horizontal: Approx. 18 inches, Vertical: Approx. 12 inches

MATERIAL
- Multi-tubular nylon tape

TENSILE STRENGTH
- 500 lbs.

**SAFETY WIRE AND LANYARD**

The safety wire and lanyard is attached to the reinforced nylon webbing at the right rear of the reserve parachute.

SAFETY WIRE MATERIAL

- Corrosion resistant steel wire

DIAMETER

- Approx. 8/100 of an inch

LANYARD MATERIAL

- Type II or Type III nylon cord gutted

**TOP PANEL**

Forming the top portion of the reserve parachute is the top panel.

MATERIAL

- Nylon duck material

WEIGHT

- Approx. 7.25 ounces per square yard

**RIPCORD PROTECTOR FLAP**

The ripcord protector flap is sewn to the top panel. It has a ¼ inch strip of yellow binding tape sewn across the top indentifying it as a MIRPS.

**RIPCORD GRIP RETAINER**

The ripcord grip retainer is sewn to the top panel. It is used to secure the ripcord grip in place.

LENGTH

- Approx 5 inches

MATERIAL

- Type I elastic webbing

**GROMMETS**

Two grommets can be found on the top panel. They cannot be bent, cracked or corroded to be serviceable.

MATERIAL

- Stainless steel

**EYELET**

There are 2 eyelets sewn to the top and bottom panels and 1 on each end panel. The hook from the pack opening spring band is attached to an eyelet.

**BOTTOM PANEL**

Forming the bottom portion of the reserve parachute is the bottom panel.

MATERIAL

- Nylon duck material

WEIGHT

- Approx. 7.25 ounces per square yard

**RED SOFT LOOPS**

The red soft loops cannot be twisted, cut or frayed to be serviceable.

MATERIAL

- Type II nylon cord gutted

TENSILE STRENGTH

- 205 lbs.

**END PANEL**

Forming the left and right portions of the reserve parachute are the end panels.

MATERIAL

- Nylon duck material

WEIGHT

- Approx. 7.25 ounces per square yard

**GROMMET**

One grommet can be found on each end panel. They cannot be bent, cracked or corroded to be serviceable.

MATERIAL

- Stainless steel

**RIPCORD GRIP**

MATERIAL

- Seamless stainless steel tubing

DIAMETER

- Approx. 5/16 of an inch

**CABLE**

There are 2 cables attached to the ripcord grip. They cannot be kinked of frayed to be serviceable.

MATERIAL

- Flexible stainless steel aircraft cable

RATED CAPACITY

- 920 lbs.

**LOCKING PIN**

There is one locking pin attached to each cable. They cannot be bent, cracked or corroded to be serviceable.

MATERIAL

- Stainless steel

**STEEL SWAGED BALL**

The steel swaged ball secures each cable to the ripcord grip. They cannot be cracked or corroded to be serviceable.

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# Army Aircraft

## FM 3-21.220 Chapter 17

**UH-60A BLACKHAWK**

**CHARACTERISTICS**

- Powered by a twin turbine engine
- Medium range, single main rotor Helicopter
- Maximum of 8 jumpers
- Drop speed - 65 to 75 knots (70 knot-opt.)
- Drop altitude - 1500 ft AGL (minimum)
- 6000 count for T-10 and 8000 count for T-11

**PREPARATION**

- Cargo doors secured- open position
- Pad and tape edges of doors
- Seats removed
- Tape troop seat and tie down fitting wells in front of cargo doors
- Modified anchor line and safety belts installed

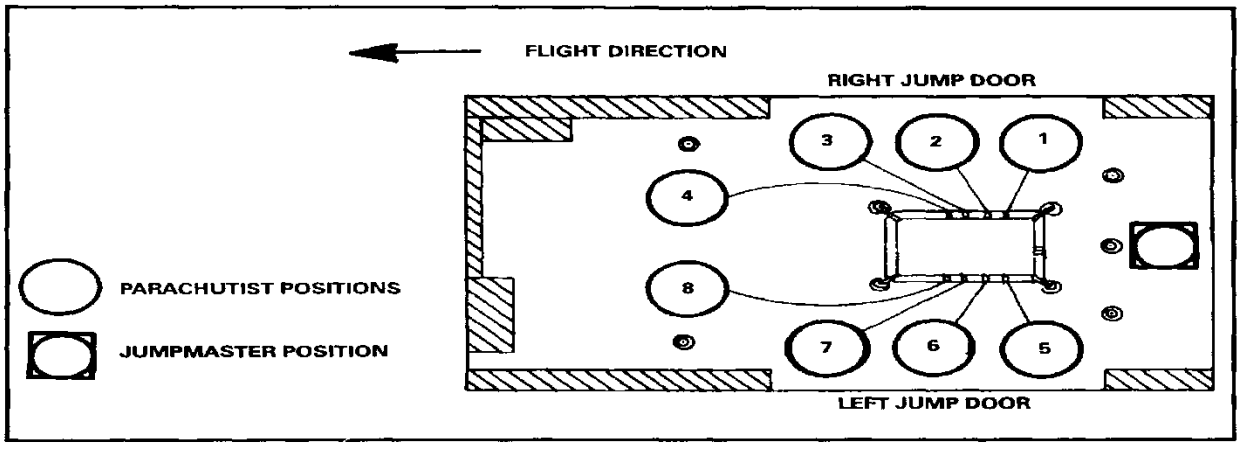
**INSPECTION**

- All protruding & sharp objects are padded and taped
- Lower leading edges of both doors padded and taped and locked in open position
- Anchor line system is complete, serviceable, and properly installed
- 3 modified safety belts are installed
- Headset/helmet intercom cable secured over- head
- The intercom extension cord is secured overhead
- All loose objects removed or secured forward

**LOADING PROCEDURES**

- Jumpers 1-4 load through right door
- Jumpers 5-8 load through left door
- Load in reverse order starting with #8
- Jumper #4 reverse bight with right hand
- Jumper #8 reverse bight with left hand
- Jumpmaster stows excess static line
- Snap hook faces front of aircraft

**SEATING ARRANGEMENT**



**LOADING PROCEDURES (CONT.)**

- Jumpmaster sounds off with "fasten safety belts"
- #4 & #8 pass their running ends to the center and secure the safety belt
- #5 & #7 pass to #6, who secures the safety belt
- #1 & #3 pass to #2, who secures the safety belt

**JUMP COMMANDS**

- GET READY
  - Issued 4 minutes or less from drop time with the aircraft level and on final approach. All seat belts are removed and pushed to the rear. The jumpmaster visually checks to insure they are clear from jumpers and equipment
- CHECK STATIC LINES
  - The jumpmaster checks the routing of each static line from the pack tray to anchor point.
- CHECK EQUIPMENT
  - Each jumper checks his own equipment.
- SOUND OFF FOR EQUIPMENT CHECK
  - Jumpers 1-8 (in order) give a verbal "okay" to the jumpmaster.
- SIT IN THE DOOR
  - The jumpmaster will issue this command 30 seconds from the drop time. (This command is omitted if the jumpers are already sitting in the door on short flights) #4 and 8 remain in place.
- STAND BY
  - Issued 8-10 seconds before the command "GO". #4 and 8 remain in place.
- GO
  - This command is oral along with an individual tap out. Jumpers exit in numerical sequence. As soon as #3 clears the door, #4 moves into the door and waits for his tap out. The same procedure is repeated for the other side. The jumpmaster controls the exit of each jumper maintaining a one second interval.

**SAFETY CONSIDERATIONS**

- Jumpmaster wears headset for communication with pilot/crew chief
- Jumpmaster <u>does not</u> jump
- Approach the A/C when instructed to do so by the Crew Chief
- Load the A/C when instructed to do so by the Jumpmaster
- Always protect your ripcord grip
- Special items of equipment that must be jumped from a standing position are not authorized
- Retrieve static lines inside the aircraft and place them inside an aviators kit bag; Do not unhook them from the modified anchor line until the A/C has landed

**CH-47 CHINOOK**

**CHARACTERISTICS**

- Tandem rotor, medium transport helicopter
- Maximum of 28 jumpers
- Drop speed - 80 to 110 knots, 90 knots optimum
- Drop altitude – 1,500 feet AGL (or 1,250 feet AGL if drop speed is 90 knots or greater)
- 6000 count for T-10 and 8000 count for T-11

**PREPARATION AND INSPECTION**

- Safety belts for each jumper
- Seats are in the down position and can easily be lifted and secured
- Ramp is clean and free of oil & water

- Head phones available and function properly
- Anchor line cable - secured & serviceable

**JUMP COMMANDS**

- GET READY
  - Issued after the six minute time warning. All seat belts are removed.
- PORT SIDE PERSONNEL, STAND UP
  - Jumpers on the port side of the aircraft stand up and secure their seats in the "up" position (if required)
- STARBOARD SIDE PERSONNEL, STAND UP
  - Jumpers on the starboard side of the aircraft stand up and secure their seats in the "up" position (if required)
- HOOK UP
  - On this command, odd-numbered personnel hook up, followed by the even- numbered personnel, who hook up between the odd-numbered personnel to form one continuous stick of 28 jumpers. The opening gate of the static line snap hook faces the starboard side of the aircraft
  - After hooking up, the static line is controlled by each jumper in a reverse bight at waist level in the left hand
- CHECK STATIC LINES
  - Same procedures as USAF aircraft
- CHECK EQUIPMENT
  - Each jumper checks his own equipment
- SOUND OFF FOR EQUIPMENT CHECK
  - Same procedures as USAF aircraft
- STAND BY:
  - Issued 8-10 seconds before the command "GO". Jumper #1 assumes a standing position at the ramp hinge (near center) of the aircraft
- GO:
  - Jumper #1 walks off the port side corner of the ramp. The jumpmaster controls the flow from his location on the port side near the ramp hinge maintaining a one second interval between jumpers

**SAFETY CONSIDERATIONS**

- Ramp position 3 degrees below horizontal
- Jumpmaster wears a safety harness, or a BA-22 parachute
- It is recommended that the JM not jump
- One safety is required
- Always protect your ripcord grip
- Retrieve static lines and place them in an aviators kit bag

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# Individual Equipment Containers

## FM 3-21.220 Chapter 2 & 12

**BALLISTIC HELMET**

The ballistic helmet is available in 5 sizes: XS, S, M, L and XL.

The ballistic helmet consists of 4 major components:

1) Helmet shell
2) Modified suspension band with drawstring and adjustable tab
3) Modified headband
4) Chinstrap

**HELMET SHELL**

The outer rim of the helmet shell must be free of any sharp or protruding edges.

**MODIFIED SUSPENSION BAND WITH DRAWSTRING AND ADJUSTABLE TAB**

The modified suspension band with drawstring and adjustable tab is located inside the helmet shell and provides approximately ½ inch space between the jumper's head and the crown of the helmet shell.

**MODIFIED HEADBAND**

The modified headband is attached to the modified suspension band with drawstring and adjustable tab. It prevents head to helmet contact.

The modified headband consists of:

1) smooth leather side
2) nylon web strap
3) six **securing tabs**
4) one **adjustable tab**.

**CHINSTRAP**

The chinstrap secures the ballistic helmet to the jumper's head.

The chinstrap consists of:

1) **long continuous portion chinstrap**
2) **short sewn portion chinstrap**.

**PULL THE DOT FASTENER WITH TAB**

The pull the dot fastener with tab is utilized as the point of detachment for the chinstrap. It is constructed of 4 plies of nylon webbing with 3 plies routed through the pull the dot fastener.

**MODIFIED FOAM IMPACT PAD**

The modified foam impact pad is an addition to the ballistic helmet for airborne operations.

MATERIAL

- ½ inch thick insulate foam rubber

**PARACHUTIST RETENTION STRAP**

The parachutist retention strap is an addition to the ballistic helmet for airborne operations.

The parachutist retention strap consists of:

1) a smooth side
2) a hook pile tape side
3) a grommet located in the center to secure it to the rear of the helmet shell.

When securing it to the helmet shell first remove the existing **½ inch mounting screw** and the A nut from the rear and replace it with the **5/8 inch mounting screw** provided with the parachutist retention strap.

**ADVANCED COMBAT HELMET**

The advanced combat helmet is available in 4 sizes: S, M, L and XL.

The advanced combat helmet consists of 3 major components:

1) Helmet shell
2) Suspension pad system
3) Modified chinstrap assembly

**HELMET SHELL**

The outer rim of the helmet shell must be free of any sharp or protruding edges.

**SUSPENSION PADS**

All 7 suspension pads must be present for all airborne operations.

The 7 suspension pads located inside the helmet shell consist of:

- 4 oval pads
- 1 crown pad
- 2 trapezoid pads

The 2 authorized suspension pads sizes are:

- Size 6 which are ¾ of an inch think
- Size 8 which are 1 inch thick

**M1950 WEAPONS CASE**

The M1950 weapons case is designed to allow the individual parachutist to jump their individual weapon or crew served weapon. With modifications this weapons case can accommodate the M240B, M249 SAW, and the 60 mm Mortar.

MATERIAL

- Heavy nylon duct material or heavy cotton duck material with ¼ inch felt padding permanently sewn inside

DIMENSIONS

- 10 inches wide
- Maximum length of 50 ½ inches
- Minimum length of 33 ½ inches

The M1950 weapons case consists of the following items:

1) Upper tie down tape
2) Lower tie down strap
3) Female portion lift fastener
4) Male portion lift fastener
5) Closing flap
6) Adjusting strap
7) Adjusting strap connectors (top and bottom)
8) Lowering line stow pocket w/ securing tab
9) Slide fastener
10) Slide fastener and tab thong
11) Quick release assembly consisting of:
    a. Quick release snap w/ opening gate
    b. Rotating claw
    c. Activating arm
    d. Female portion quick release snap
12) Quick release link
13) "V" ring

When packing the M1950 weapons case with the M16 rifle you must insert the weapon muzzle down, forward assist up.

The M1950 weapons case has two safety features incorporated.

1) First safety feature:
    a. Secure the tab thong between the male portion lift fastener and the female portion lift fastener
    b. If the lift fastener is unserviceable route the upper tie down tape through the slide fastener and tab thong
2) Second safety feature:
    a. Route the adjusting strap through the appropriate set of adjusting strap connectors and secure it with a half hitch

**HARNESS SINGLE POINT REALEASE**

MATERIAL

- Type VIII nylon webbing

TENSILE STRENGTH

- 3600 lbs.

The harness single point release consists of the following items:

1) 2 adjustable D-ring attaching straps
    a. one end terminates in a triangle link
    b. one end terminates in a snap hook
2) Release handle cable assembly
    a. release handle
    b. release handle cable
    c. release handle lanyard
3) Release handle cross strap
4) Attaching loops: white, green and red
5) Female portion leg strap release assembly
    a. cable loop retainer (only item that must be serviceable on the female portion leg strap release assembly)
    b. webbing retainer
    c. grommet
6) Male portion leg strap release assembly
7) Equipment retainer straps with corresponding friction adapters

**ALICE PACK**

The alice pack comes in 2 sizes:

1) Medium w/ maximum internal weight capacity of 70 lbs.
2) Large w/ maximum internal weight capacity of 95 lbs.

The alice pack consists of the following items:

1) Nylon pack tray with outer cargo pockets
2) 2 adjustable shoulder carrying straps
3) An aluminum alloy frame with backrest pad

**HOOK PILE TAPE LOWERING LINE**

The hook pile tape lowering line allows the jumper to lower their combat equipment during their fourth point of performance.

MATERIAL

- 1 inch wide tubular nylon webbing

TENSILE STRENGTH

- 4000 lbs

LENGTH

- 15 feet

The hook pile tape lowering line consists of the following items:

1) Looped end hook pile tape lowering line
2) Ejector snap with attached yellow safety lanyard
3) Retainer flap
4) 2 hook and pile tabs on either end of the retainer flap

**AT4 JUMP PACK (AT4JP)**

The AT4JP is designed to carry one M136/ AT4 weapon round and an M16 rifle.

MATERIAL

- Heavy nylon duct material with ¼ inch felt padding permanently sewn inside

MAXIMUM DIMENSIONS

- 47 inches long and 9 inches in diameter

WEIGHT

- Approx. 29 lbs.

The AT4JP consists of the following items:

1) 4 side securing tabs
2) Rifle muzzle stow pocket
3) Rifle butt stow pocket
4) Quick release assembly
    a. quick release link
    b. D-ring
    c. quick release snap
5) Lowering line stow pocket with securing tabs
6) Carrying handle
7) Upper tie down tape
8) Launcher forward end securing strap
9) Launcher forward end non- adjustable cross D-ring strap
10) Launcher aft end securing strap
11) Launcher aft end shock absorber
12) Quick fit adapters

When rigging the AT4JP the following applies:

1) When using the aft end shock absorber you only need 1- 8x8 inch square of energy dissipating material (cardboard honeycomb)
2) If you are not using the aft end shock absorber you need 3- 8x8 inch squares of energy dissipating material
3) When rigging the Gustav you will need 2- 9x9 inch squares of energy dissipating material. You must cut a hole in the energy dissipating material for the aft end.

When jumping the AT4JP the following applies:

1) The AT4JP must always be jumped with the front mounted alice pack for balance. It is **NEVER** jumped as a single item of equipment.
2) Can be jumped anywhere in the stick, preferably at the front of the stick
3) Must be at least 5'6" to jump
4) Cannot be jumped from a seated position
5) Upper tie down tape is routed below the chest strap
6) Attached at the 20 minute time warning by safety personnel

# Air Force Aircraft
## FM 3-21.220 Chapter 16

**C-130 "HERCULES"**

**CHARACTERISTICS**

- Powered by a four engine, turbo prop
- Medium range cargo aircraft that comes in several models
- Drop speeds are between 125-135 knots (130 knots being optimum)
- Can carry a maximum of 80 combat equipped paratroopers

**FOR AIRBORNE OPERATIONS IT COMES EQUIPPED WITH**

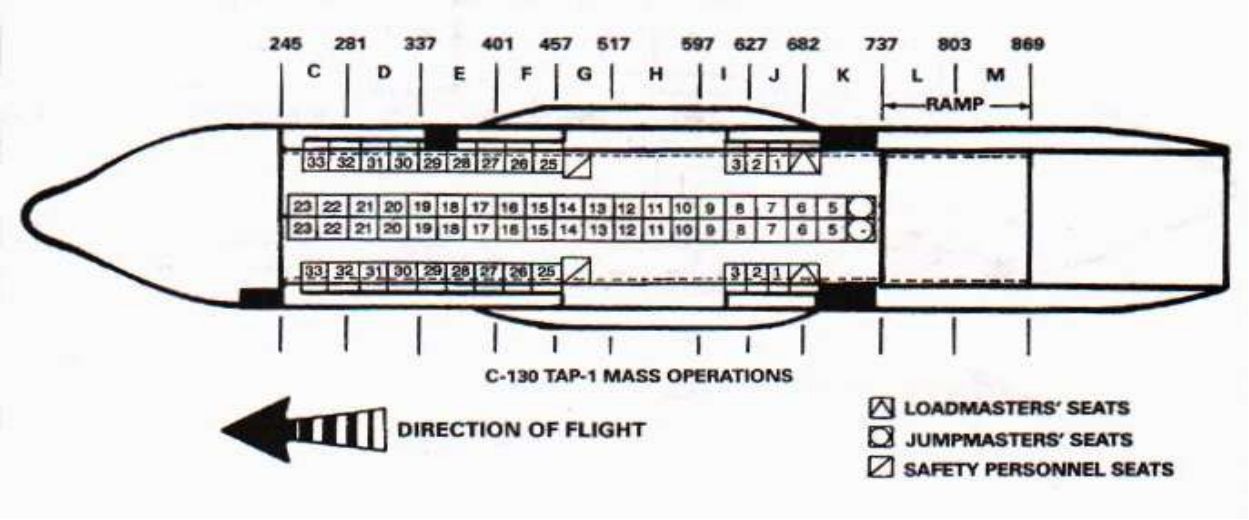
- Four anchor line cables - each can accommodate a maximum of 20 jumpers
- Seven sets of jump caution lights
- Towed Parachutist Retrieval System – 1 per door
- Two paratroop doors
- Ramp operations are possible

**THREE BASIC SEATING ARRANGEMENTS**

- Peacetime training mission
- In-Flight rigging mission
- Combat concentrated load

**PEACETIME TRAINING MISSION**

- Accommodates 64 combat equipped jumpers
- 68 seats required
- 6 Supervisory Personnel
    - 1 Primary JM
    - 1 Assistant JM
    - 2 Non Jumping Safeties
    - 2 USAF Loadmasters

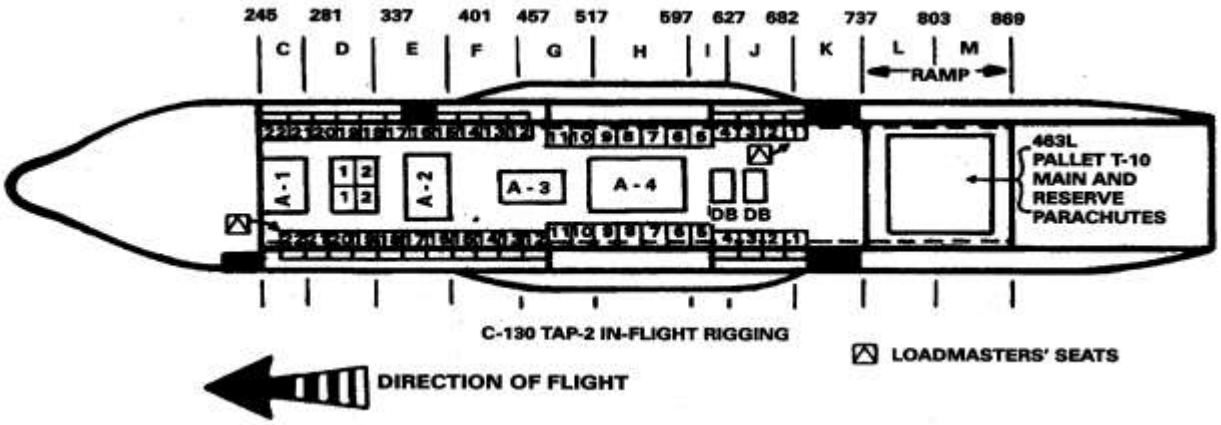



**IN-FLIGHT RIGGING MISSION**

These procedures should be used on all flights of 4 hours or more in duration. In-flight rigging conserves the energy of the jumpers, and maximizes comfort for as long as possible.

- Accommodates 44 combat equipped jumpers
- 48 seats required
- 7 Supervisory Personnel
    - 1 Primary JM

- 2 Assistant JM
  - One from chalk
- 2 Non Jumping Safeties
- 2 USAF Loadmasters

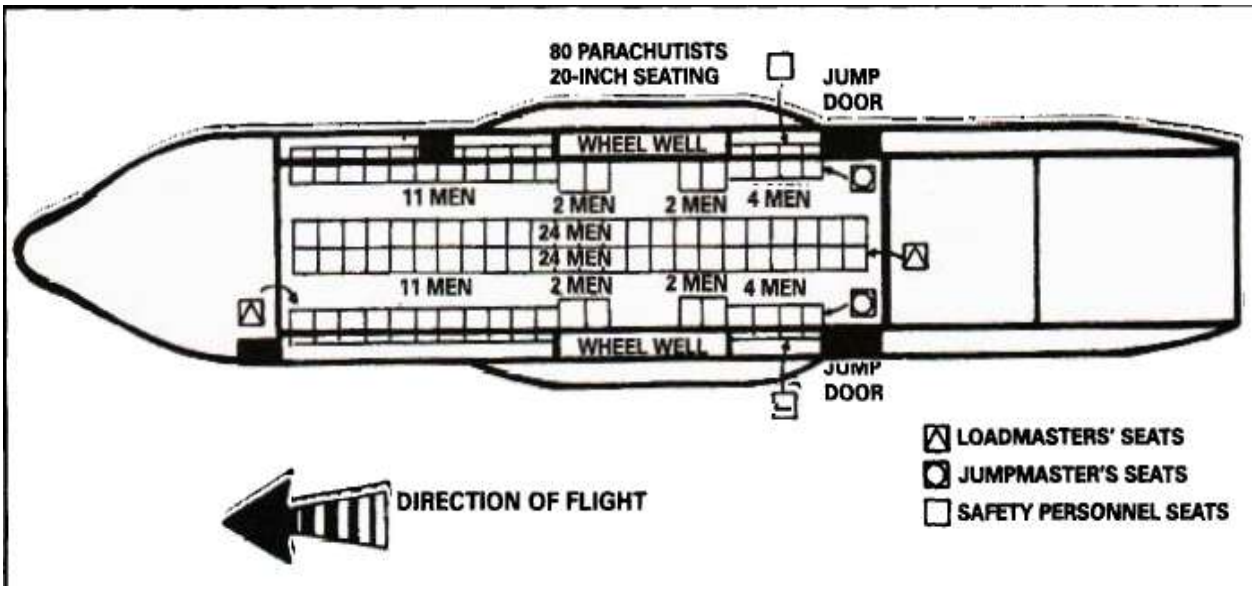



**TWO TYPES OF IN-FLIGHT RIGGING**

- Station rigging
- Buddy rigging (preferred method)

**COMBAT CONCENTRATED LOAD**

- Accommodates 80 combat equipped jumpers
- 82 seats required
- 6 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 2 Jumping Safeties
  - 2 USAF Loadmasters
- ALL PERSONNEL WILL EXIT

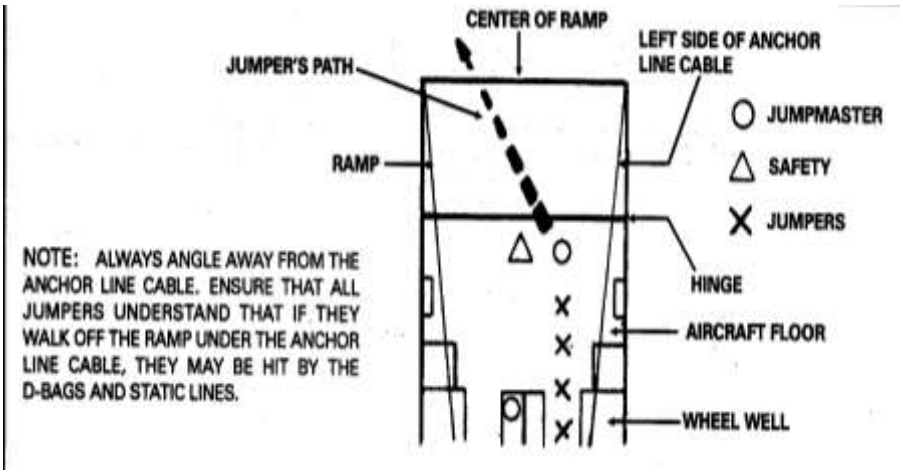



**OVER THE RAMP**

- Accommodates 40 combat equipped personnel

- 44 seats required
- 6 Supervisory Personnel
    - 1 Primary JM
    - 1 Assistant JM
    - 2 Non Jumping Safeties
    - 2 USAF Loadmasters
- Only two anchor line cables are used
- Maximum 20 jumpers per cable
- Small clevis is taped and padded at fuselage station 893 (FS 893)
- Static line is controlled by each jumper in a reverse bight at waist level
- Exit the tail gate at a 30 degree angle

**EXIT PROCEDURES**




**C-17 GLOBEMASTER**

**CHARACTERISTICS**

- Swept wing, four engine, turbofan aircraft
- Can carry large payloads inter-continental distances without refueling

**FOR AIRBORNE OPERATIONS IT COMES EQUIPPED WITH**

- Four anchor line cables
    - 27 Outboard
    - 24 Inboard
- 2 Canadian retrieval systems
- 13 sets of jump caution lights
- Dedicated antenna for TAC-SAT
- 6 Minute slow down
- 1 USAF Loadmaster
- Drop speed of 130 Knots +/- 3 Knots
- A/C must have a deck angle of 6-7 degrees

**THREE BASIC SEATING ARRANGEMENTS**

- Peacetime training mission
- In-Flight rigging mission
- Combat concentrated load

**PEACETIME TRAINING MISSION**

- 5 Supervisory Personnel
    - 1 Primary JM
    - 1 Assistant JM

- 2 Non Jumping safeties
- 1 USAF Loadmaster

**IN-FLIGHT RIGGING MISSION**

- 12 Supervisory Personnel
  - 1 Primary JM
  - 8 Assistant JM'S (7 from chalk)
  - 2 Non Jumping Safeties
  - 1 USAF Loadmaster

**COMBAT CONCENTRATED LOAD**

- 5 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 2 JUMPING Safeties
  - 1 USAF Loadmaster

**AIRCRAFT INSPECTION**

- Exterior
- Floors
- Adequate seats/ seat belts, proper mission configuration
- Excess equipment stored out of way
- Emergency exits outlined in yellow
- Anchor line cables
- Towed parachutist retrieval system (have loadmaster operate)
- Paratroop doors have no sharp edges or protruding objects nearby
- Pip-pin (C-130) OR Troop door up-lock (C-17)
- Manual lever for ramp secured (left door)
- Jump platforms
  - No cracks or bends
  - Non-skid material present
  - Down locks seat properly
  - Secured to the floor
- Air deflectors (have loadmaster operate)
- Jump caution lights
- Interior lighting (normal/tactical)
- Emergency bell/ horn (have loadmaster operate)
- Emergency equipment
  - First aid kit
  - Fire extinguishers
  - Oxygen masks (EPOS)
- Public address system (operational)
- Air sickness bags and ear plugs

**BA-22**

**CHARACTERISTICS**

- C-9 Canopy
- Weighs approximately 35 lbs.
- Rate of decent is 18-20 feet per second
- 28' flat circular canopy

- Can be OD green, brown, white and orange in color
- 2 Methods of release
    - Automatic release
    - Manual ripcord grip assembly

**INSPECTION**

- Harness assembly
- Ejector snaps
- Quick fit “V” rings
- Canopy release assemblies
- Automatic opening device lanyard
- Locking pins and cable
- Personnel lowering device
- Rear locking pins and loops
- Overall inspection of parachute
- Electronic tracking device

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# T-11 Personnel Parachutes

**T-11 MAIN PARACHUTE**

The T-11 series parachute is used during static line airborne operations. The T-11 series is a non-steerable canopy.

WEIGHT
- Approx. 38 lbs.

DIAMETER
- Nominal: 28.6 feet

SAFE DROP SPEEDS
- 150 knots Maximum
- 50 knots Minimum

AVG. DEPLOYMENT TIME
- 6.5 seconds

RATE OF DECENT
- 18.5 feet per second

The main parachute consists of ten major components:

6) Universal static line modified
7) Deployment bag
8) Drogue parachute
9) Bridle assembly
10) Deployment sleeve
11) Canopy assembly
12) Slider
13) Riser assembly
14) Harness assembly
15) Pack tray

**UNIVERSAL STAIC LINE MODIFIED**

LENGTH
- Approx. 15 feet

MATERIAL
- ¾ inch, tube edge, type 6.6 nylon webbing

TENSILE STRENGTH
- 4,000 lbs

**UNIVERSAL STATIC LINE SNAP HOOK**

Universal static lines point of attachment to the aircraft's anchor line cable. It consists of a dual locking spring opening gate with a Rivet pin located center mass.

DIMENSIONS
- Approx. 6 inches in length and approx. 2 inches wide

MATERIAL
- Cadmium plated Chrome-Molybdenum

RATED CAPCITY
- 1,750 lbs.

**MAIN CURVED PIN**

The main curved pin is located approximately 12 feet from the universal static line snap hook.

LENGTH
- Approx. 1.3 inches

MATERIAL
- Stainless steel

**MAIN CURVED PIN ATTACHING LOOP**

The main curved pin attaching loop secures the main curved pin to the universal static line modified.

MATERIAL
- 3/8 inch wide Type I preshrunk nylon webbing

TENSILE STRENGTH
- 200 lbs.

**MAIN CURVED PIN COVER**

The main curved pin cover protects the main curved pin and main curved pin attaching loop.

LENGTH
- Approx. 6 inches

MATERIAL
- Cotton duck material

**STATIC LINE SLEEVE**

The static line sleeve prevents nylon-to-nylon contact between the universal static line modified and the pack tray.

LENGTH
- Approx. 27 inches

MATERIAL
- Cotton duck material

**RISER ASSEMBLY**

When attached to the canopy, the riser assemblies provide four individual risers.

**RISERS**

LENGTH
- Approx. 28 inches

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**SLIP ASSIST LOOP**

The slip assist loops are formed into the risers and sewn with reinforced stitching. They provide the jumper a means of securing a hand hold when executing slips.

MATERIAL
- Type VII nylon webbing

**SLIP ASSIST TAB**

There are 3 slip assist tabs sewn to the front of each riser. They aid the jumper in executing slips.

MATERIAL
- Type XVII nylon webbing

**ARMY PARACHUTE LOG RECORD STOW POCKET**

The Army parachute log record stow pocket is sewn to the rear risers. It is utilized to store the DA 3912, Army Parachute Log Record.

**MALE FITTING CANOPY RELEASE ASSEMBLY**

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**HARNESS ASSEMBLY**

The harness assembly consists of a right and left upper main lift web assemblies and the lower saddle assembly.

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

The harness assembly consists of the following items:

1) Canopy release assembly
2) "D" Rings
3) Main lift web
4) Tuck pocket
5) Chest strap
6) Chest strap friction adapter
7) Webbing retainer
8) Equipment ring
9) Ejector snap
10) "L" shaped ejector snap pad
11) Triangle link
12) Saddle
13) Leg straps
14) Quick fit "V" ring
15) Diagonal back strap
16) Sizing channels
17) Diagonal back strap pad
18) Back strap adjuster
19) Horizontal back strap

**CANOPY RELEASE ASSEMBLY**

When completely assembled the rated capacity is 5000 lbs.

**FEMALE FITTING CANOPY RELEASE ASSEMBLY**

The grove of the male fitting canopy release assembly sits on the grove of the female fitting canopy release assembly.

MATERIAL

- Cadmium plated forged steel alloy

RATED CAPACITY

- 2500 lbs.

**LATCH**

The latch is utilized to secure the male fitting canopy release assembly to the female fitting canopy release assembly.

**CABLE LOOP**

The cable loop is what the jumper places his or her thumb threw to recover from the drag.

MATERIAL

- Flexible stainless steel aircraft cable

RATED CAPACITY

- 920 lbs.

**SAFETY CLIP**

The safety clip serves 2 purposes, to secure the cable loop inside the canopy release assembly and to prevent foreign material from entering the canopy release assembly.

**"D" RINGS**

The D-rings serve as points of attachment for the reserve parachute.

MATERIAL

- Cadmium plated forged steel alloy

RATED CAPACITY

- 5000 lbs

**MAIN LIFT WEB**

The main lift web is adjustable and serves as 2 points of adjustment on the harness. The main lift web consists of the main lift web tuck tab assembly, the main lift web adjustment strap and the main lift web adjuster.

LENGTH

- Approx. 25 inches

MATERIAL

- Type VII nylon webbing

TENSILE STRENGTH
- 6000 lbs.

**MAIN LIFT WEB TUCK TAB ASSEMBLY**

The main lift web tuck tab assembly consists of a snap fastener and tuck tab.

**MAIN LIFT WEB ADJUSTMENT STRAP**

MATERIAL
- 1 ply of Type VII nylon webbing and 1 ply Type VIII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**MAIN LIFT WEB ADJUSTER**

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**TUCK POCKET**

The main lift web is adjusted to 2 of the 3 sizes by inserting the tuck tab into the tuck pocket.

**CHEST STRAP**

The chest strap is sewn to the left main lift web. It is one of the points of adjustment on the parachute harness. There is a tabbed portion formed at the end of the chest strap.

LENGTH
- Approx. 23 inches

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**CHEST STRAP FRICTION ADAPTER**

The chest strap is secured to the chest strap friction adapter located on the right main lift web.

LENGTH
- Approx. 2 inches

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 500 lbs.

**WEBBING RETAINER**

There are a total of 6 webbing retainers on the parachute harness. They can be replaced by a retainer band if they are not present or serviceable.

MATERIAL
- Type I elastic webbing

**EQUIPMENT RING**

The equipment rings are located just below the chest strap on the main lift web. They are used to secure items of combat equipment.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**EJECTOR SNAP**

The ejector snaps for the leg straps are located on the main lift web below the equipment rings.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

The ejector snap consists of three sub components, they are:
4) ACTIVATING LEVER
5) BALL DETENT
6) OPENING GATE

**"L" SHAPED EJECTOR SNAP PAD**

Located just below each ejector snap is the "L" shaped ejector snap pad. This is an added comfort feature and does not have to be present for the parachute harness to be serviceable.

MATERIAL
- Nylon duck cloth filled with ¼ inch thick cellular urethane foam

**TRIANGLE LINK**

The triangle links are located just below the ejector snap. They serve as points of attachment for the ejector snap on the hook pile tape lower line.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 500 lbs.

**SADDLE**

Continuation of the main lift web and routed under the jumpers buttocks.

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**LEG STRAPS**

The leg straps are sewn midway through the saddle.

LENGTH
- Approx. 28 inches

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**QUICK FIT V-RING**

One quick fit V-ring is located at the end of each leg strap. They are attached to the appropriate ejector snap. They serve as 2 more points of adjustment on the parachute harness.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**DIAGONAL BACK STRAP**

The diagonal back straps form an "X" across the jumpers back. They can be sized in five sizes and serve as 2 more points of adjustment on the parachute harness.

LENGTH
- Approx. 20 inches

MATERIAL
- Two plies of Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**SIZING CHANNELS**

The sizing channels are numbered 1-5.

**DIAGONAL BACK STRAP PAD**

The diagonal back strap pad is an added comfort feature and does not have to be present for the parachute harness to be serviceable.

DIMENSIONS
- Approx. 12 ¼ inches at the longest point and approx. 3 ½ inches at the widest point.

MATERIAL
- Nylon duck cloth filled with ¼ inch thick cellular urethane foam

**BACK STRAP ADJUSTERS**

The back strap adjusters are located at the end of each diagonal back strap.

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 2500 lbs.

**HORIZONTAL BACK STRAP**

The horizontal back strap is routed through the lower portion of the back strap adjuster, through the main lift web, across the small of the jumpers back, through the opposite main lift web and terminates at the opposite back strap adjuster. It serves as 2 more points of adjustment on the parachute harness.

LENGTH
- Approx. 105 inches

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 5500 lbs.

**PACK TRAY ASSEMBLY**

DIMENSIONS
- Approx. 20 inches long by 16 inches wide by 14 inches deep

MATERIAL
- Duck textured nylon fabric

The pack tray assembly consists of the following items:

1) Diagonal back strap retainer
2) Diagonal back strap keeper
3) Directional snap fastener
4) Horizontal back strap retainer
5) Horizontal back strap keeper
6) Waistband
7) Waistband adjuster panel
8) Metal adjuster
9) Pack closing flaps
10) Grommets
11) Main closing loop

**DIAGONAL BACK STRAP RETAINER**

The diagonal back strap retainers are sewn to the upper portion of the pack tray.

LENGTH
- Approx. 5 ½ inches

MATERIAL
- Type VIII nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**DIAGONAL BACK STRAP KEEPER**

The diagonal back strap keepers are sewn to the upper portion of the pack tray.

LENGTH
- Approx. 13 inches

MATERIAL
- Type XVII nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**DIRECTIONAL SNAP FASTENER**

The directional snap fasteners are used to secure the diagonal back strap retainers and horizontal back strap retainers back onto themselves to secure the diagonal back straps and horizontal back strap to the pack tray.

**HORIZONTAL BACK STRAP RETAINERS**

The horizontal back strap retainers are sewn to the lower portion of the pack tray.

LENGTH
- Approx. 5 ½ inches

MATERIAL
- Type VIII nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**HORIZONTAL BACK STRAP KEEPER**

The horizontal back strap keeper is sewn to the lower portion of the pack tray.

LENGTH
- Approx. 12 inches

MATERIAL
- Type XVII nylon webbing

TENSILE STRENGTH
- 2500 lbs.

**WAISTBAND**

The waist band is sewn to the bottom right corner of the pack tray. During inspection you must insure that at least 50% of the stitching is present securing the waistband to the pack tray for the pack tray to be serviceable.

LENGTH
- Approx. 43 inches

MATERIAL
- Type VIII nylon webbing

TENSILE STRENGTH
- 4000 lbs.

**WAISTBAND ADJUSTER PANEL**

The waistband adjuster panel is sewn to the bottom left corner of the pack tray. It consists of a nylon portion and the metal adjuster. During inspection you must insure that at least 50% of the stitching is present securing the waistband adjuster panel to the pack tray for the pack tray to be serviceable.

NYLON PORTION

LENGTH
- Approx. 7 inches

MATERIAL
- Type VII nylon webbing

TENSILE STRENGTH
- 6000 lbs.

**METAL ADJUSTER**

LENGTH
- Approx. 2 ¼ inches long by 2 inches wide

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 1000 lbs.

**PACK CLOSING FLAPS**

The pack closing flaps form the top, bottom, left and right portions of the pack tray.

MATERIAL
- Nylon duck cloth

WEIGHT
- Approx. 12 ounces per square yard

**GROMMETS**

Attached to all four pack closing flaps is a grommet. The grommets cannot be bent, cracked or corroded to be serviceable.

MATERIAL
- Chrome plated hard brass

**STATIC LINE SLACK RETAINER LOOP**

The static line slack retainer loop is sewn to the top pack closing flap.

MATERIAL
- 9/16 of an inch wide Type I nylon webbing

TENSILE STRENGTH
- 500 lbs.

**STATIC LINE SLACK RETAINER BAND**

The static line slack retainer band is attached to the static line slack retainer loop.

MATERIAL
- 1 ¼ inch long by 3/8 inch wide rubber retainer band

**MAIN CURVED PIN PROTECTR FLAP**

The main curved pin protector flap is present to protect the main curved pin from damage and premature activation. The main curved pin protector flap is attached to the top pack closing flap.

**TUCK FLAP**

This tuck flap is the storage location for the main curved pin protector flap. It is also attached to the top pack closing flap.

**OUTER STATIC LINE STOW BARS**

The outer static line stow bars are sewn to the left and right pack closing flaps.

LENGTH
- Approx. 4 inches

MATERIAL
- 9/16 of an inch wide Type I nylon webbing

TENSILE STRENGTH
- 500 lbs.

**INNER STATIC LINE STOW BARS**

The inner static line stow bars are sewn to the left and right pack closing flaps.

LENGTH
- Approx. 5 ½ inches

MATERIAL
- 9/16 of an inch wide Type I nylon webbing

TENSILE STRENGTH
- 500 lbs.

**T-11 RESERVE PARACHUTE**

The T-11 reserve parachute is a troop chest mounted, ripcord center pull, emergency type parachute that has been designed for manual activation in the event of a malfunction of the main parachute.

WEIGHT
- Approx. 14.8 lbs.

DIAMETER
- Nominal: Approx. 29 feet
- Aeroconical in design

The T-11 reserve parachute consists of six major components:
5) Extractor parachute
6) Ejector spring with protection cap
7) Canopy assembly
8) Reserve riser assembly
9) Reserve pack tray
10) Ripcord assembly

**RESERVE RISER ASSEMBLY**

Each reserve riser has a connector snap attached.

**CONNECTOR SNAP**

MATERIAL
- Cadmium plated forged steel alloy

RATED CAPACITY
- 4200 lbs.

**CONNECTOR SNAP RETAINING TIE**

Each connector snap is secured to the reserve pack tray by a connector snap retaining tie.

LENGTH
- Approx. 24 inches

MATERIAL
- Tying tape "super tack"

TENSILE STRENGTH
- 50 lbs.

**RESERVE PACK TRAY**

MATERIAL
- Duck textured nylon fabric

WEIGHT
- Approx. 12 ounces per square yard

**PACK CLOSING FLAP**

The reserve pack tray consists of a top, bottom, left and right pack closing flap. The top and bottom pack closing flaps have one grommet each while the left and right pack closing flaps have two each.

**TUCK POCKET**

One tuck pocket is sewn to each of the four pack closing flaps. The tuck pockets are used to secure the rip cord assembly to the reserve parachute.

**CARRYING HANDLE**

The carrying handle aids the jumper in carrying the reserve parachute around the departure air field**.**

LENGTH
- Approx. 19 ¼ inches

MATERIAL
- Type VIII nylon webbing

TENSILE STRENGTH
- 4000 lbs.

**SPREADER BAR TIES**

The spreader bar ties are routed around the internal spreader bar, through the grommets, secured by a surgeons knot with overhand knots with its ends trimmed to 1 inch.

LENGTH
- Approx. 10 inches

MATERIAL
- Gutted red Type III tubular nylon cord

**ARMY PARACHUTE LOG RECORD STOW POCKET**

The army parachute log record stow pocket is utilized to store the DA 3912, Army Parachute Log Record.

**WAISTBAND RETAINER**

The waistband retainers are sewn to the rear of the reserve pack tray. The waistband is routed behind both waistband retainers keeping the reserve snug to the jumper's body.

LENGTH
- Approx. 4 ½ inches

MATERIAL
- Type VIII nylon webbing

TENSILE STRENGTH
- 4000 lbs.

**RIPCORD ASSEMBLY**

The ripcord assembly requires a more than 14 lbs. pull to activate the reserve parachute.

The ripcord assembly includes the following:
1) Tuck tab
2) Directional arrow
3) Ripcord handle
4) Curved pin lanyard
5) Curved pin

**TUCK TAB**

The rip cord assembly has a top, bottom and 2 side tuck tabs.

**DIRECTIONAL ARROW**

The top tuck tab is identified by the directional arrow. It must be pointing skyward when the reserve parachute is worn.

**RIPCORD HANDLE**

The ripcord handle is red in color.

**CURVED PIN LANYARD**

The curved pin lanyard is sewn by re-enforced stitching to the back of the ripcord assembly.

MATERIAL
- White spectra cord

TENSILE STRENGTH
- 700 lbs.

**CURVED PIN**

There is a curved pin attached to each end of the curved pin lanyard. They are sewn in opposite directions and cannot be bent, cracked or corroded to be serviceable.

MATERIAL
- Stainless steel

# Duties and Responsibilities of the DZSO and the DZSTL

## FM 3-21.220 Chapter 7, 20-23 & 25

**DZSO**

The DZSO is a key member of what we refer to as a Drop Zone Support Team. The difference in the required duties of the DZSO as opposed to the DZSTL is tied to whether or not the mission is supported by an Air Force Combat Control Team. As a result of a signed Memorandum of Agreement (MOA) we are training you to perform duties for select Computed Air Release Point (CARP) operations without the presence of CCT, therefore your designation for those operations will become Drop Zone Support Team Leader (DZSTL).

**DZSO PREREQUISITES**

Must be an officer, warrant officer, or NCO (USAF must be SRA and USMC must be CPL)

- Must be a qualified and current jumpmaster
- Must have observed DZSO duties on a personnel or heavy equipment drop at least once
- Performed duties as ASST DZSO once

**DZSTL**

When acting as the DZSTL you are the direct representative of the ground forces commander and the air lift commander.

**DZSTL PREREQUISITES**

- Must be an Officer, Warrant Officer, NCO, or Civilian Equivalent
- Must have received training on conducting airdrop operations without the support of a CCT
- For personnel and heavy equipment drops you must be a qualified and current jumpmaster

**DUTIES AND RESPONSIBILITES OF THE DZSO AND DZSTL**

The DZSO and DZSTL have specific duties and responsibilities they must perform before, during and after the airborne operation.

- Attends pre-mission briefings
- Coordinates with CCT if required
- Opens the DZ through range control and closes it when accountability of all personnel, air items, and equipment is completed
- Has the DZ fully operational one hour prior to drop time
- Conduct ground or aerial recon of DZ prior to drop time from the PI
- Establishes communications with the DACO one hour prior to drop time
- Co-locates with USAF CCT one hour prior to drop time
- Monitor surface winds from the PI
- Assistant DZSO/DZSTL monitors surface winds from the highest point of elevation or trail edge of DZ
- Establish 10 minute window 12 MINUTES prior to drop time
    - Give a GO or NO GO 2 minutes prior to drop time
- Controls all medical evacuations
- Relays No Drop Signal:
    - Surface winds exceed 13 knots
    - An unsafe act is observed on ground or in the air
- DZSO/DZSTL will have positive communication with the ADZSO/ADZSTL, if needed, and the senior medic
- Correctly marks the drop zone
- Operates all visual acquisition aids
- Submits post mission reports properly
- Ensure that no unauthorized vehicles are on the DZ
- All antennas will be tied down
- No vehicular movement on the DZ from the time the aircraft is in sight until the last jumper has landed
- Ensure all helicopters operating in the vicinity keep at least 1 km from the DZ NLT 10 min prior to TOT

- Be familiar with the duties of the Malfunctions Officer/NCO IAW AR 59-4.
- Assist the airborne commander in the development of a written risk assessment for high and extremely high risk events

**PERSONNEL AND SUPPORT REQUIREMENTS**

The Drop Zone Support Team will consist of at least two personnel. The senior person meeting these prerequisites will be designated as the Drop Zone Support Team Leader. Additional support personnel and equipment may be required.

**PERSONNEL AIRDROPS-MULTIPLE AIRCRAFT OR SINGLE AIRCRAFT OPERATIONS ON A DZ OF 2100 METERS OR MORE IN LENGTH**

- 1 DZSO or DZSTL and 1 Assistant DZSO or DZSTL
- 4 Medics with 2 FLAS
- Malfunction Officer/NCO with Camera
- Parachute Recovery Detail
- Parachute Turn-in Detail
- 2 Radios
- 2 Wind measuring devices
- 2 Compasses
- Smoke Grenades (as required)
- Vehicles (as required)
- Road Guards (as required)
- VS-17 Panels/Lights
- Piball equipment with helium source (If applicable)
- Binoculars, strobe light, signal mirror
- 2 sets of Night Vision Goggles
- Military Police (If Applicable)
- Boat Detail (If Applicable)

**PERSONNEL AIRDROPS-SINGLE AIRCRAFT OPERATIONS ON A DZ LESS THAN 2100 METERS IN LENGTH**

- 1 DZSO or DZSTL
- 2 Medics with 1 FLA
- 1 Radio
- 1 Compass
- 1 Wind measuring device
- All other requirements remain unchanged

**WATER HAZARDS**

If water is located within 1,000 meters of the drop zone and it is more than 4 feet deep and 40 feet wide you must have a boat detail.

**DZSTL ADDITIONAL SUPPORT REQUIREMENTS**

- 11 White omni-directional lights
- 1 white air traffic control light and/or flares
- 1 red lens for air traffic control light and/or flares

**PUBLICATIONS**

- INSTALLATION RANGE REGULATION
- MOST RECENT MAP SHEET OF THE AREA
- COPY OF UNIT ASOP
- ANY OTHER LOCALLY REQ. REGULATIONS
- COPY OF DROP ZONE SURVEY

- AR 59-4 JOINT AIRDROP RECORDS, MALFUNCTIONS INVESTIGATIONS AND ACTIVITY REPORTING
- BLANK FORMS (FLASH REPORT, etc)

**PRE-MISSION BRIEFING**

Prior to the airborne operation the DZSO/DZSTL must attend a detailed pre-mission briefing. If possible this should be done directly with the aircrew. If it is not possible, the units S3 Air should provide the minimum essential information. The following checklist should be used as a guide to insure all the pertinent information has been provided.

- JA/ATT (Joint Airborne/Air Transportability Training) Mission sequence number
- Verify DZ name and location
- TOT(s) or Block time
- No Drop Procedures
- Verify current DZ Survey Data
- Type of drop-PE, CDS, HE
- Type of release-CARP, GMRS, VIRS
- Type of parachutes
- Number of jumpers or bundles
- Type and number of aircraft
- DZ Markings
  - RAM
  - Panels/ lights
  - Smoke/ flares
  - Emergency no drop procedures
  - Mission cancellation indication
- DZ support
  - Communications available
  - Frequencies/ call signs
  - Visual acquisition aids
  - NAV AIDS
- Aircraft/ Mission commanders name, rank, unit and telephone number
- DZSO/DZSTL name, rank, unit and telephone number
- Post mission reports

**DROP ZONE SURVEYS**

There are 2 types of drop zone surveys

- Tactical Assessment of Drop Zone
- AF form 3823

**AF 3823**

All information we need concerning the drop zone is on the AF form 3823.

The Air Force has a listing of all available drop zones that were approved for use. The list is called the Assault Zone Availability Report (AZAR). This list is attainable through the Air Force.

AZAR is compiled from inputs provided by 21st AF, McGuire AFB, NJ and 22nd AF, Travis AFB, CA. It identifies drop zones, landing zones, and extraction zones available in CONUS for use by the Air Mobility Command.

- All obstacles must be identified within a 1000 meters of DZ
  - An aerial recon must be conducted to identify the hazards
- Instructions for filling out AF Form 3823 can be found in the Pathfinder FM
- Once AF Form has been completed it must be verified by the first O-6 of the supported unit
- Completed AF form 3823 is good for 5 years from date of approval signature.

The columns of the AF form 3823 are explained below and all blocks require an entry including "N/A" if applicable.

1a. DZ name
1b. ZAR index number (AF drop zone website reference number)
2a. Country
2b. State
3. Map sheet and series information
4a1. Date DZ was surveyed
4a2. Name and rank of surveyor
4a3. Contact phone number
4a4. Surveyor's name
4b. DZ approval or disapproval by mission type and day use
4c. Date approved for ground operations
4d. Date of safety of flight review
4e. Date of MAJCOM approval
5a. Controlling unit or agency
5b. Memorandum of understanding / land use agreement
5c. Contact phone number
5d. Range control frequencies (FM/ UHF)
5e. Contact phone number
6a-c. Dimensional data (length, width, radius)
6d-f. PI distances from the lead edge of the DZ
7a-d. DZ axis data (direction of flight)
8a-d. Ground point elevations
9a-f. DZ coordinates
9g. Point of origin data (prominent terrain feature used to help find PI)
9h. DZ center point and PI grid locations
9i. DZ corners (grid coordinates for the corners of the DZ)
10. DZ diagram or digital photographic
11. Remarks (all hazards/ restrictions and pertinent information about the DZ)
12. Photograph available
13. Low level routes available

Note: When performing a safety of flight review on a foreign DZ, as much information as possible should be filled in on the AF form 3823. At a minimum, the following items must be filled in: items 4d, 6a, 6b, 7, 9a-f, and 9h. A copy of the foreign DZ should be attached to the safety of flight review.

AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ

**DROP ZONE SURVEY**

| 1A. DZ NAME | 1B. ZAR INDEX NO. | 2A. COUNTRY | 2B. STATE |
|---|---|---|---|
| Juliet North DZ | 1506 | Italy | |

3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP: M 792 Maniago NL 33 4 A3 ED1 19680101

**4. SURVEY APPROVAL/DISAPPROVAL DATA**

| 4A1. DATE SURVEYED | 4A2. TYPED NAME AND GRADE OF SURVEYOR | 4A3. PHONE NUMBER (DSN) | 4A4. UNIT |
|---|---|---|---|
| 20110115 | Walter J. Mettler, Capt USAF | (314) 634-6940 | 8 ASOS |

4B. DROP ZONE APPROVAL/DISAPPROVAL (A = APPROVED, D = DISAPPROVED)

| FOR | CDS/CRL/CRS | PER | HE | MFF | SATB | CRRC | HSLLADS | HVCDS |
|---|---|---|---|---|---|---|---|---|
| DAY | A | A | D | A | A | D | A | A |
| NIGHT | A | A | D | A | A | D | A | A |

| 4C. DATE APPROVED FOR GROUND OPERATIONS | NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY | PHONE NUMBER (DSN) | SIGNATURE |
|---|---|---|---|
| 20110121 | Andrew S. Zieseniss, Maj, US Army | (314) 634-6003 | |
| | UNIT AND LOCATION: 173d ABCT, S3, USAG Vicenza, Italy | | |

| 4D. DATE SAFETY OF FLIGHT REVIEW APPROVED | NAME AND GRADE OF REVIEWING OFFICER | PHONE NUMBER (DSN) | SIGNATURE |
|---|---|---|---|
| 20110202 | Scott R. Lichtwardt, 1Lt, USAF | (314) 480-2822 | |
| | UNIT AND LOCATION: 86 OSS/OSK, Ramstein AB, Germany | | |

| 4E. DATE OF MAJCOM APPROVAL | NAME AND GRADE OF APPROVING AUTHORITY | PHONE NUMBER (DSN) | SIGNATURE |
|---|---|---|---|
| 20110204 | John T. Budd, Col, USAF | (314) 480-8600 | |
| | UNIT AND LOCATION: 86 OG/CC, Ramstein AB, Germany | | |

**5. COORDINATING ACTIVITIES**

| A. DZ CONTROLLING AGENCY OR UNIT | B. MEMORANDUM OF UNDERSTANDING/LAND USE | C. PHONE NUMBER (DSN) |
|---|---|---|
| 173d ABCT S3 Air Office, Vicenza | YES ☒ NO ☐ ATTACHED ☐ | (314) 634-7638 |

| D. RANGE CONTROL | E. PHONE NUMBER (DSN) |
|---|---|
| No Range Control, contact Italian Air Force Liaison Officer for coordination | (314) 634-8213 |

**6. DZ DIMENSIONS** (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)

| A. LENGTH | B. WIDTH | C. RADIUS |
|---|---|---|
| 2185 yards / 1998 meters | 1000 yards / 915 meters | N/A |

| POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE | D. CDS PI | E. PE PI | F. HE PI |
|---|---|---|---|
| | 450 yards / 411 meters | 450 yards / 411 meters | N/A |

**7. DZ AXIS DATA** (OPTIONAL FOR CIRCULAR DZ)

| A. MAGNETIC | B. GRID (MGRS) | C. TRUE | D. SOURCE/DATE OF VARIATION DATA |
|---|---|---|---|
| 323 degrees | 326.5 degrees | 325 degrees | 20110105 |

| 8. GROUND POINT ELEVATION | A. CDS PI | B. HE PI | C. PE PI | D. HIGHEST |
|---|---|---|---|---|
| | 796 feet / 243 meters | N/A | 796 feet / 243 meters | 852 feet / 260 meters |

**9. DZ COORDINATES**

| A. SPHEROID | B. DATUM | C. GRID ZONE | D. EASTING | E. NORTHING |
|---|---|---|---|---|
| WGS 84 | WGS 84 | 33T UM | 3 | 51 |

F. GPS DERIVED COORDINATES: YES ☒ NO ☐

G. POINT OF ORIGIN: From DZ gate: 32 degrees for 555 yards

| H. POINT | MGRS COORDINATES | WGS84 LATITUDE (D-M.MM) | WGS84 LONGITUDE (D-M.MM) |
|---|---|---|---|
| DZ CENTERPOINT | 33T UM 24555 11047 | N 46 07.83 | E 012 43.73 |
| CDS PI | 33T UM 24879 10556 | N 46 07.57 | E 012 43.99 |
| PE PI | 33T UM 24879 10556 | N 46 07.57 | E 012 43.99 |
| HE PI | N/A | N/A | N/A |

**I. DZ CORNERS MGRS COORDINATES**

| LEFT LEADING EDGE | RIGHT LEADING EDGE |
|---|---|
| 33T UM 24723 09961<br>N 46 07.24 E 012 43.89 | 33T UM 25487 10464<br>N 46 07.53 E 012 44.47 |
| **LEFT TRAILING EDGE** | **RIGHT TRAILING EDGE** |
| 33T UM 23624 11630<br>N 46 08.13 E 012 43.00 | 33T UM 24388 12132<br>N 46 08.41 E 012 43.58 |

DZ NAME

Juliet North DZ

10. DZ DIAGRAM


11. REMARKS

HAZARDS:
1. User assumes all responsibility for injury and loss of life or damage to property/equipment.
2. 30ft tall flag pole/windsock located on left edge of DZ approximately 400 yards from leading edge.
3. Mountains located 2.5nm W, NW, N, NE of DZ. Terrain rises rapidly. Potential wind shear.
4. Buildings (70 yds long x 40 yds wide x 30 ft tall) located 10 yards up and 15 yards in from left leading edge corner.
5. Large concrete slab flush with ground located 40 yards up and 25 yards in from left leading edge corner.
6. 8 ft tall Rock pile and small trees located 1000 yds up and 25 yards in from right leading edge corner.
7. Asphalt road 15 yds long from left leading edge towards concrete pad.

RESTRICTIONS:
1. DZ located in Restricted Area LIR 49 South (FL155-FL370) approximately 2nm past DZ trailing edge.
2. All racetracks will be to the right (East) to avoid Celina Meduna Firing Range if active.

NOTES:
1. There are approved VFR maneuvering ground tracks to the DZ - contact Italian AF LNO on front page for the most recent routes.
2. File request for activity NLT 60 days prior through ODC (Rome) via the Italian AF LNO.
3. NOTAMS are coordinated NLT 30 days prior to use via the Italian AF LNO.
4. Expect Low-Level briefing and file flight plan with Aviano Base Ops 1 day prior to flight at DSN (314) 632-7222.

| 12. PHOTOGRAPH AVAILABLE | LOW LEVEL ROUTES |
|---|---|
| YES ☒ NO ☐ | ☒ NONE AVAILABLE<br>☐ ROUTE NAME/DESIGNATOR |

AF IMT 3823, 20021001, V2 *(REVERSE)*

**AF FORM 4304 STRIKE REPORT**

The AF form 4304 is basically a score card for the Air Force. Since the release point is computed by the aircrew on a CARP drop zone, the Air Force must have some documentation on the crew's performance.

The clock direction and distance from the PI will be recorded on the AF form 3823 and forwarded to higher headquarters. Upon completion they should be forwarded through your unit S3.

- PI is given for Strike report if first parachute suspended item lands within **25 yards** of the point of impact
- Success if 90% of parachute items land on surveyed drop zone

The following is a list of the blocks and an explanation of the contents on the AF form 4304:

1. DATE: Enter date and year. Use either calendar or Julian date. When a "time" is required use local or GMT consistent with the date.
2. LOCATION: Enter DZ name
3. CCT AND UNIT: DZSTL name and unit
4. DZ/LZ CONTROL OFFICER AND UNIT
5. DROP ZONE SAFETY OFFICER AND UNIT
6. LINE NO: One line filled out for each pass of each aircraft. No drop passes should use a line number also. The remarks column should reflect the reason for the no drop situation.
7. TYPE ACFT: Mission design series
8. UNIT: Unit of aircraft
9. CALL SIGN: Call sign of lead and, if applicable, formation position number
10. TYPE MISSION; Refer to legend for abbreviations. Your initial appropriate training will dictate what type of drop zone you are qualified to operate
11. ETA: Estimated time of arrival, estimated TOT, or S3 air brief. Keep the unit of time consistent throughout the form
12. ATA/ATD: Actual time of every pass and actual time of departure
13. STRIKE REPORT:
    a. YDS: Distance first jumper. Container/ pallet lands
    b. CLOCK: Use direction of flight as the 12 o'clock and it's back azimuth as the 6 o'clock, estimate direction from PI to first jumper/ container/ pallet. If item ands conditions permit, the actual measurement is preferred
14. LZ: Mark the "S" box if a landing occurred between the beginning of the touchdown zone and the first 500 feet. If the landing was not successful (i.e., go-around), short of the touchdown zone or 500 feet beyond the beginning of the touchdown zone, mark the "U" box and provide comments in the REMARKS box
15. SURF WIND: Surface wind direction in degrees, and velocity in knots
16. SCORE METHOD: Refer to LEGEND for abbreviations
17. MEAN EFFECTIVE WIND: Time taken and at what altitude
    a. TIME: Self-explanatory
    b. ALT: Should be drop altitude
    c. DIR & VEL: Wind direction in degrees and velocity in knots
18. REMARKS: Enter remarks as appropriate

# DROP ZONE/LANDING ZONE CONTROL LOG

| DATE |
|---|
| |

| LOCATION | CCT AND UNIT | DZ/LZ CONTROL OFFICER AND UNIT | DROP ZONE SAFETY OFFICER AND UNIT |
|---|---|---|---|
| | | | |

**LEGEND**

AH-Airland *(Heavy)*
AL-Airland
CD-CDS/CRL/CRS
GM-GMRS

HE - Heavy Equipment
HO - HALO/HAHO
IL - Inverted "L"

LS-Instrument Landing System
PE-Personnel
RB-Radar Beacon Drop

SCORE METHOD
M - Measured
P - Paced
E - Estimated

| LINE NO | TYPE ACFT | UNIT | CALL SIGN | TYPE MSN | ETA | ATA / ATD | STRIKE REPORT YDS | STRIKE REPORT CLOCK | LZ S | LZ U | SURF WIND | SCORE METHOD | MEAN EFFECTIVE WIND TIME | MEAN EFFECTIVE WIND ALT | MEAN EFFECTIVE WIND DIR & VEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |

AF IMT 4304, 20020903, V1

REPLACES AMC 168, DEC 92

# Computed Air Release Point (CARP)

## FM 3-21.220 Chapters 20-23 & AFI 13-217

**CARP DROP ZONES**

CARP drop zones are used by Air Force fixed wing aircraft. The navigator on board the aircraft determines the release point. The DZSO or the DZSTL has the responsibility of marking the drop zone and ensuring that it is of the proper size to support the mission.

**OPERATION TYPES**

- PERSONNEL DROPS
- CDS DROPS
- HEAVY EQUIPMENT DROPS

**DOOR EXITING PROCEDURES FOR PERSONNEL**

- ADEPT OPTION 1(**A**lternate **D**oor **E**xiting **P**rocedures for **T**raining)
  - One door, one pass; half the jumpers minus 1
- ADEPT OPTION 2
  - One door followed by the other door, one pass; Total jumpers minus 1
- MASS EXIT
  - Both doors with a half second interval between them; Even number jumpers- half the total number, Odd number jumpers- half the total and use smaller number

**PLANNING ALTITUDES**

- PERSONNEL
  - 1000 feet AGL
- HEAVY EQUIPMENT
  - 1100 feet AGL

**MINIMUM SIZE REQUIREMENTS FOR ONE JUMPER OR PLATFORM**

- PERSONNEL
  - 600 yards x 600 yards
- HEAVY EQUIPMENT
  - 1000 yards in length x 600 yards in width
- CDS
  - Requirements can be found in AFI 13-217

**SIZE ADDITIONS**

- NIGHT (1800-0600)
  - Add an additional 100 yards to both the length and the width
- ALTITUDE OVER PLANNING MINIMUM
  - Add an additional 30 yards to both the length and width for every 100 feet over the planning altitude
- NOT IN TRAIL FORMATION
  - Add an additional 100 yards to the width for more than one aircraft flying not in trail formation
- ADDITIONAL JUMPERS OR PLATFORMS
  - Add an additional 75 yards to the length for each additional jumper
  - Add an additional 400 yards to the length for each additional platform on a C-130
  - Add an additional 500 yards to the length for each additional platform on a C-17 or C-5

| ALTITUDE (AGL) | WIDTH (NOTE 1, 0R C-17 NOTE 3) | LENGTH (NOTE 2) | |
|---|---|---|---|
| **PERSONNEL (Static Line)** | | | |
| To **1000 ft** | **600 yds** / 549 m | 1 Parachutist | 600 yds / 549 m |
| | | Additional Parachutist | **Add 75 yds** / 69 m **to the trail edge for each additional** parachutist. (PI for ST/ Pararescue personnel) |
| Above **1000 ft** | **Add 30 yds** / 28 m to **width and length for each 100 ft above 1000 ft**. (Add 15 ft / 14 m to each side of DZ, 15 yds / 13 m to each end.) | | |
| **HEAVY EQUIPMENT** | | | |
| To **1100 ft** | **600 yds** / 549 m | 1 Platform | 1000 yds / 915 m |
| | | Additional Platforms | **Add 400 yds** / 366 m (C-130), **500 yds** / 457 m (C-17/C-5) **to the trail edge for each additional** platform |
| Above **1100 ft.** | **Add 30 yds** / 28 m to **width and length for each 100 ft above 1100 ft.** (Add 15 ft / 14 m to each side of DZ, 15 yds / 13 m to each end.) | | |

Note: 1 ( N/A for AFSOC assigned / gained, aircraft OPCON to USSOCOM, or theater special operations command ):

a. For day visual formations increase width by 100 yds / 92 m ( 50 yds / 46 m on each side )
b. For C-130 SKE AWADS formation, increase width by 400 yds / 366 m ( 200 yds / 184 m on each side )
c. At night increase width by 100 yds / 92 m for single ship visual drops ( 50 yds / 46 m on each side ) or 200 yds / 184 m for visual formations ( 100 yds / 92 m on each side)

Note: 2 ( N/A for AFSOC assigned / gained, aircraft OPCON to USSOCOM, or theater special operations command ):

a. At night increase width by 100 yds / 92 m for single ship visual drops ( 50 yds / 46 m on each side ) (N?A for C-17 doing GPS drops.)

Note: 3 C-17 DZ width adjustments (more that one may be required)

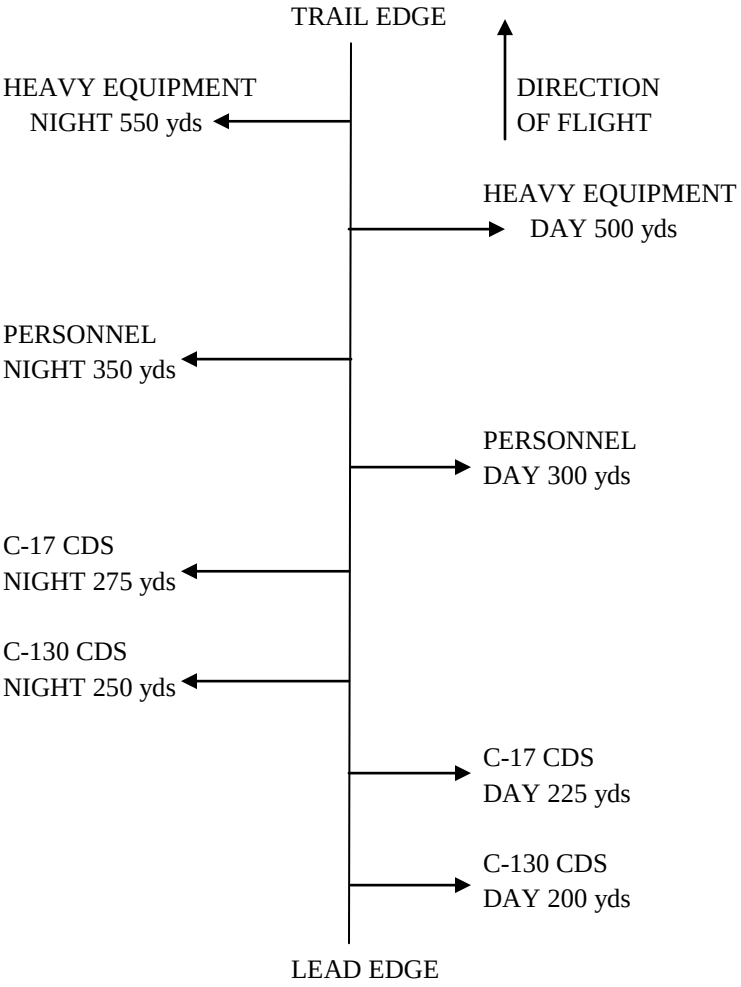
a. For visual formations ( day or night ) increase width by 100 yds / 92 m ( 50 yds / 46 m on each side )
b. For night pilot directed airdrops, increase width an additional 100 yds / 92 m ( 50 yds / 46 m on each side ) ( Does not apply to aircraft performing GPS Drops. )
c. For SKE HE / CDS formations minimum DZ basic width using center PI's is 1240 yds for 2 ship elements and 1800 yds for 3 ship elements. When using offset PI's minimum basic width is 1100 yds for 2 ship elements and 1300 for 3 ship elements.

**POINT OF IMPACT (PI) LOCATIONS**

The PI is determined by the type of operation being executed. All PI's will be measured from the lead edge of the drop zone and centerline.

- PERSONNEL (C-130 or C-17)
  - DAY
    - Minimum of 300 yards

- NIGHT
  - Minimum of 350 yards
- CDS (C-130)
  - DAY
    - Minimum of 200 yards
  - NIGHT
    - Minimum of 250 yards
- CDS (C-17)
  - DAY
    - Minimum of 225 yards
  - NIGHT
    - Minimum of 275 yards
- HEAVY EQUIPMENT (C-130 or C-17)
  - DAY
    - Minimum of 500 yards
  - NIGHT
    - Minimum of 550 yards



**CARP PI MARKINGS**

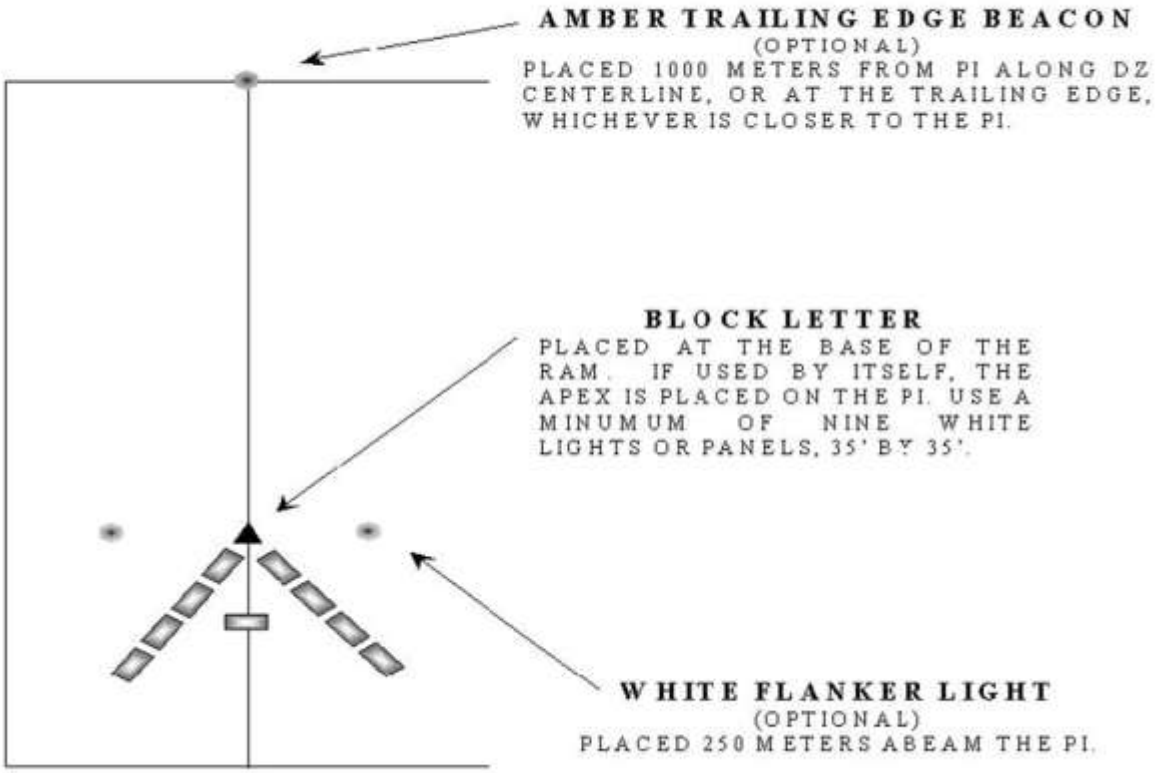
- Primary means of marking the drop zone is a Raised Angle Marker (RAM).
- Code letters for authentication
  - J, C, A, R & S
- Circular or random approach DZ
  - H & O

**DAY TIME MARKINGS**

- Minimum of nine panels for the code letter
- At least 35 feet x 35 feet
- Only the PI must be marked
- Center the top of the code letter at the base of the RAM
- Color and code letter will be pre-coordinated and the color will be contrasting with the surrounding area

**NIGHT TIME MARKINGS**

- Minimum of nine white omni-directional lights for the code letter
- At least 35 feet x 35 feet
- Flanker lights must be placed 250 meters to the right and left of the PI. Use white omni-directional lights
- Trail edge of the DZ or 1000 meters centerline from the PI, whichever comes first, must be marked with an amber rotating beacon. Beacons are not considered lights.




CODE LETTERS

**CONTROL CENTER**

The control center is where the DZSO/ DZSTL is located to control and observe the operation.
The location is determined by the type of operation.

**PERSONNEL**

- At the PI

**CDS**

- 200 yards from the PI at the 6 o'clock

**AWADS, HEAVY and FREE DROPS**

- Off the DZ at the best vantage point

**NO DROP SITUATIONS**

It may become necessary for you as the DZSO/DZSTL to temporarily halt a jump or to declare a no drop or mission cancellation.

- Initiate red smoke, Red always means no drop
- To close DZ temporarily, place two parallel bars made of four VS-17 panels each, perpendicular to the line of flight.
- To cancel the mission, form an X out of eight VS-17 panels on the PI
- Scramble or remove the code letter
- Other means of communicating a no drop could be an air traffic control light, signal mirror, flares or any specific means covered by the crew in the pilot brief.

**AUTHORIZED WIND MEASURING DEVICES**

- DIC-3
- AN/PMA-3A
- TURBOMETER

**DZST EQUIPMENT FAMILIARIZATION**

**AN/PMQ-3A (anemometer):** This is a calibrated, hand held wind measuring device, used for measuring ground wind. Oriented correctly, it will give wind direction in degrees, by pressing the trigger. It is capable of reading the wind from 0 to 15 knots on the low

scale and from 0 to 60 knots on the high scale. Select High or low using the High/Low selector switch. The anemometer must be calibrated every six months. **NSN**: 6660-00-515-4339

**Turbo Meter:** This is an electronic wind speed indicator. It provides wind speed accurately, and is pocket size for convenience. The turbo meter has four scales which are displayed on a three digit light Emitting Diode display. The scales are knots per hour, feet per second, meters per second, and miles per hour. For best results, keep axis of turbo meter within 20 degrees of the direction of wind. **NSN**: 1670-00-T33-900

**Amber Rotating Beacon:** Electric driven light which provides amber rotating light for trail edge marker on a night CARP drop zone. **NSN**: Local purchase item.

**VS-17 Marker Panel Aerial:** Two sided panel. One side is fluorescent orange, sometimes referred to as international orange. The other side is cerise or commonly referred to as red. The panel is 2 feet wide and 6 feet long. It has six tie down points used to attach the panel to stakes. It also has three snap fasteners on the short ends in the stow pocket. It should be folded up so the olive drab (OD) green is showing. The color of the panel used should best contrast the surrounding area. **NSN**: 8345-00-174-6865

**Light, Marker, Ground Obstruction:** Also known as the beanbag light. It is powered by one BA-200. The color of the light can be changed with the use of interchangeable colored plastic domes. These can be used in light holes or on the surface, secured with tent pegs, or by filling the bottom with sand or rocks. **NSN**: 6230-00-115-9996

**Whelen Light:** Named after the Whelen Corporation which manufactured the light. It is powered by either the BA-4368 or the lithium battery used in the PRC-77 radios. The light is placed on top of the battery and is ready for operation. The color of the light can be changed with different colored domes. **NSN**: Local purchase item

**M-2 Light Baton:** A flashlight powered by 2 BA-30's. The color of the light can be changed with different lenses that are stored in the base compartment of the light. This light is used in light holes or on top of the ground attached to a tent peg. **NSN**: 6230-00-926-4331

**Aerial, Marker, Distress:** An omni-directional flashing (strobe) light. This has a very far range. A directional cover can snap on the top for the stealth operator. Colors can be changed with snap on caps. The strobe light also has infrared (IR) capabilities. **NSN**: 6230-00--67-5209

**Mirror, Emergency signaling, type II:** The signal mirror when used properly, can be used to signal aircraft by reflecting sunlight. There is a set of instructions on the back of the signal mirror for proper use and aiming. The signal mirror can still be used on hazy days. One misconception is that it can only be used when facing the sun. It can be used in all directions and can be seen as far as the horizon will go. **NSN**: 6350-00-105-1252

**SE-11 Light Gun:** A long range directional visual signaling device used to signal aircraft to mark the release point on the drop zone. It is powered by 5 BA-30's and can be set up for remote operations. It has a red cap/lens, normally used as a no drop signal. Light, Traffic Air B-2 replaces SE-11 **NSN**: 6210-00-578-6754

**Pilot Balloon:** the piball is a ten or thirty gram rubber balloon that, when filled with helium to the specified circumference is used to measure the mean effective wind which is the average wind from the ground to drop altitude. **NSN**: Balloon Meteorological 10 Gram 6660-00-663-7933, Balloon Meteorological 30 Gram 6660-00-663-8159

10 gram 57 inch day, 74 inch night
30 gram 75 inch day, 94 inch night

**Lighting Unit (Piball):** This light is attached to the piball for night operations. The piball is inflated to a greater dimension to compensate for the weight of the light so that the same ascension rate is achieved. The piball light has a wet cell battery that is activated by water, or fluid. When temperatures fall below 50 degrees the piball light activates faster by using warm water. **NSN**: 6660-00-839-4927

**Drift Scale:** Slide type scale that uses a 90 degree angle to measure the ascent of the piball for determining the mean effective wind. **NSN**: Locally produced by TASC (a protractor with a string through the center with a weight can be used). Also for this purpose, the Thedolite, **NSN** 6675-00-861-7939, Pocket Transit (with built in clinometer) **NSN** 6675-00-641-5735, and the Clinometer, **NSN** 6675-00-313-9730

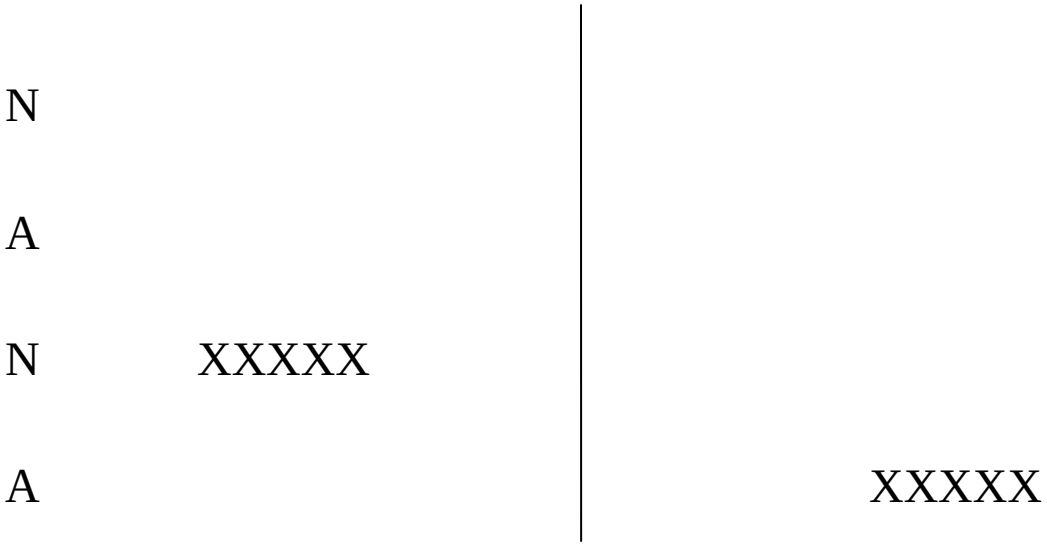
**AN/PRC-119:** Frequency modulation of FM man portable radio used for contacting the aircraft with FM communication capabilities. This radio can also be used for Navaid with aircraft that have FM homing capabilities. It has a range of 4 to 16 kilometers without power increasing accessories.

**PRC-113:** Is a man portable UHF/VHF AM and has quick jam resistant electronic counter-countermeasures (ECCM) transceiver. Designed for short range (5 to 15 miles) tactical ground to ground or ground to air communications.

**DZST GUIDE TO REFERENCES**

- AFI 13-217
- AFI 11-231
- AFI 11-2c130 Volume 1
- AFI 11-2c141 Volume 1
- FM 3-21.220
- FM 3-21.38
- TC 31-24
- Memorandum of agreement, Airdrop operations without combat control teams (CCTs), dated 27 June 1987

# CARP PROBLEM SETUP



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# "A" Series Containers
## FM 3-21.220 Chapter 14

**A-7A CARGO SLING**

The A-7A cargo sling consists of the following components:

1) 1 strap
2) Strap fastener, located at the end of each strap
3) 1 D-Ring

**STRAP**

LENGTH
- 188 inches

MATERIAL
- Type X cotton or Type VII nylon

**CHARACTERISTICS**

WEIGHT
- 8 lbs.

MAXIMUM WEIGHT (CARGO PARACHUTE NOT INCLUDED)
- G-14 cargo parachute
  - 500 lbs.
- T-10 cargo parachute
  - 360 lbs.

MINIMUM WEIGHT
- G-14 cargo parachute
  - 200 lbs.
- T-10 cargo parachute
  - 90 lbs.

MAXIMUM DIMENSIONS
- 30 inches wide
- 48 inches long
- 66 inches high to include the cargo parachute

MINIMUM DIMENSIONS
- Must be large enough to stabilize the cargo parachute

**LOAD CONFIGURATIONS**
- 2 Strap load
  - 200-300 lbs.
- 3 Strap load
  - 300-400 lbs.
- 4 Strap load
  - 400-500 lbs.

When rigging the A-7A cargo sling as a 3 strap load the following applies:

1) 1 strap is laid out as the main strap, thick lip portion of the friction bar facing down and away from the load
2) 2 straps will be laid out parallel to each other over the main strap approximately 14 to 16 inches apart, thick lip portion of the friction bar facing down and away from the load
3) Center the load on the straps, rough side toward the strap fasteners
4) Route free running end of main strap through all appropriate handles on the load
5) Route free running end of main strap through both D-rings
6) Secure the main strap tightly
7) Roll all excess webbing hand over hand toward the load
   a. Secure with ¼ inch cotton webbing using a surgeon's knot locking knot
8) Parallel straps are routed from inside to outside through the D-rings
9) Secure the 2 parallel straps tightly

10) Roll all excess webbing hand over hand toward the load
    a. Secure with ¼ inch cotton webbing using a surgeon's knot locking knot
11) Excess webbing should not extend above the top of the load
12) Load will have a rough side and a smooth side

When attaching the G-14 cargo parachute you must ensure:

1) Risers go directly to their attaching points the D-rings
2) 4 tie downs are attached to the load and tied in a bow knot
3) Static line is free to deploy
4) Risers are not routed around or under any part of the container

**DROGUE DEVICE**

The drogue device is used when jumpers are to follow bundles. There are attached to the break cord-attaching loop with a girth hitch.

- 1 drogue device for a C-130
- 2 drogue devices for a C-17
- 3 drogue devices for a C-5

**NON-BREAKAWAY STATIC LINE**

- Remains with the aircraft after the parachute deploys
- Clevis is routed through upper looped portion of static line
- Break cord tie is constructed of Type II or Type III nylon cord gutted
- Must have drogue device attached if parachutists are to follow load
- Cannot be used from a rotary wing aircraft

**BREAKAWAY STATIC LINE**

- Remains attached to the apex of the parachute after it deploys
- Clevis is attached to the upper looped portion of the static line by Type II or Type III nylon cord gutted
- Break cord tie is constructed with a minimum of ½ inch tubular nylon
- Can be used on either fixed or rotary wing aircraft

**A-21 CARGO BAG**

The A-21 cargo bag consists of the following components:

1) Canvas cover
2) Sling assembly with scuff pad
3) Quick release assembly
4) 2- ring straps

**CANVAS COVER**

MATERIAL

- Cotton duck material

DIMENSIONS

- 97 inches by 115 inches

**SLING ASSEMBLY WITH SCUFF PAD**

Consists of:

1) 1 main strap, 188 inches in length
2) 2 side straps, 144 inches in length
3) 4 carrying handles

SCUFF PAD DIMENSIONS

- 30 inches by 48 inches

**QUICK RELEASE ASSEMBLY**

Consists of:

1) Quick release device with safety clip
2) 1 fixed strap
3) 3 quick release straps

**RING STRAPS**

Consists of:

1) 4 inch steel rod ring
2) 1- 9 inch strap terminating at a strap fastener
3) 1-7 inch strap terminating at a D-ring

**CHARACTERISTICS**

WEIGHT

- 18 lbs.

MAXIMUM WEIGHT (CARGO PARACHUTE NOT INCLUDED)

- G-14 cargo parachute
  - 500 lbs.
- T-10 cargo parachute
  - 500 lbs.

MINIMUM WEIGHT

- G-14 cargo parachute
  - 200 lbs.
- T-10 cargo parachute
  - 90 lbs.

MAXIMUM DIMENSIONS

- 30 inches wide
- 48 inches long
- 66 inches high to include the cargo parachute
  - Can be extend to 69 inches for the stinger missile or 90mm recoilless rifle

When rigging the A-21 cargo bag the following applies:

1) Spread the canvas cover out with the strap keepers facing down
2) Sling assembly with scuff pad is centered on the canvas cover with the carrying handles facing down
   a. Thread the straps through the strap keepers
3) Flip the canvas cover and sling assembly with scuff pad over
4) Center the load
5) Wrap the load, side flaps first
6) Neatly fold the excess material of the end flaps
7) Attach the quick release straps to the quick release assembly with the thick lip portion of the floating metal bar facing down
8) Center the quick release assembly on the top of the load with the rotating disk facing up
9) Route the free running ends of the main strap through the strap fasteners on the ring straps
   a. Do not tighten
10) Route the quick release straps over the top of the steel rod ring
11) Place a half turn in the quick release straps so they come underneath the steel rod ring to the side of the load
12) Route the free running ends of the side straps through the strap fasteners of the quick release straps
13) Alternately tighten the main strap and the side straps , keeping the quick release assembly centered on the load
14) Fold excess webbing hand under hand toward the load
    a. Secure with ¼ inch cotton webbing using a surgeon's knot locking knot

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# Practical Work in the Aircraft

## FM 3-21.220 Chapters 5, 10 & 16

**PWAC**

THREE TIME WARNINGS

1) 20 minute
2) 10 minute
    a. 10 and 20 minute time warnings begin and end at shoulder level in closed fists. As the jumpmaster issues the verbal command "TEN MINUTES" extend hands and arms forward while spreading the fingers and thumbs, then return to shoulder level in closed fists.
3) 1 minute
    a. The jumpmaster will issue the one minute time warning by extending the lead arm toward the jumpers and raising the index finger, sounding off with "ONE MINUTE."

ONE TIME ADVISORY

1) 30 seconds

NINE JUMP COMMANDS

1) "Get Ready"
    a. It begins at shoulder level, all fingers and thumbs extended and joined, palms facing the jumpers. As the jumpmaster issues the verbal command "GET READY", extend both arms straightforward until the elbows lock, ensuring that the palms remain facing the jumpers.
2) "Outboard Personnel, Stand Up"
    a. This jump command is executed in two parts. The first part begins at shoulder level, index and middle fingers extended and joined, remaining fingers and thumbs curled to the palm. As the jumpmaster issues the verbal command "OUTBOARD PERSONNEL" the arms are extended down to the sides at a 45-degree angle. As the jumpmaster issues the verbal command "STAND UP", first extend and join all fingers and thumbs, rotate the hands so the palms face up, and then raise the arms straight overhead keeping the elbows locked.
3) "Inboard Personnel, Stand up"
    a. This jump command is also executed in two parts. The first part begins at shoulder level, centered on the chest, once again, index and middle fingers extended and joined, all remaining fingers and thumbs curled to the palm. As the jumpmaster issues the verbal command "INBOARD PERSONNEL", the arms are extended towards the inboard seats until the elbows lock. As the jumpmaster issues the verbal command "STAND UP" the arms are first moved back to the sides and down, all fingers and thumbs are extended and joined, the hands are rotated so the palms face up, and then raise the arms straight overhead keeping the elbows locked.
4) "Hook Up"
    a. This jump command may begin in two different ways. It may begin at shoulder level or it may begin with the arms extended straight overhead. A hook will be formed in the index finger of each hand. All remaining fingers and thumbs form fists. As the jumpmaster issues the verbal command "HOOK UP", move the arms in a pumping motion, up and down, or down and up. This motion must be repeated a minimum of three times.
5) "Check Static Lines"
    a. This is a plural command since there will normally be more than one static line attached to the anchor line cable. This jump command begins at eye level, index fingers and thumbs forming an "O", remaining fingers extended and joined, palms facing each other and the knife edge of the hands facing the jumpers. As the jumpmaster issues the verbal command "CHECK STATIC LINES", extend the arms straight forward to a near elbow locked position, insuring the knife-edge of the hands remain facing the jumpers. This motion must be repeated a minimum of three times.
6) "Check Equipment"

a. This jump command may begin in two different ways. It may begin with the fingertips centered on the chest, all fingers and thumbs extended and joined, palms facing the chest or it may begin with the arms extended to the sides at shoulder level, all fingers and thumbs extended and joined, palms facing the jumpers. As the jumpmaster issues the verbal command "CHECK EQUIPMENT", extend the arms to the sides at shoulder level, or bend the arms at the elbow, bringing the fingertips to the center of the chest. This motion must be repeated a minimum of three times.

b. After issuing this command, the jumpmaster will observe their stick of jumpers as they check their equipment by leaning to the left and then to the right. Once the jumpmaster sees that all movement has ceased, they will give their fellow jumpmaster a thumbs up. However, for testing purposes, they will issue this thumbs up to the safety. At this time the jumpmaster is free to check their equipment. They will check at a minimum, the front rim of the advanced combat helmet, their chinstrap, the ejector snap of the chest strap, both leg straps, and the ejector snap for the hook pile tape lowering line.

7) "Sound off for Equipment Check"

a. The jumpmaster will form their hands into cups and place the thumbs behind the ears, with the remainder of the hands cupped alongside the outer rim of the helmet. As the jumpmaster issues the verbal command "SOUND OFF FOR EQUIPMENT CHECK" and drop the hands and wait until they receives "ALL OKAY JUMPMASTER" from the number one jumper.

8) "Stand By"

a. The hand and arm signal is the same as the first part of the second jump command. It begins at shoulder level, index and middle fingers extended and joined, remaining fingers and thumbs curled to the palm. As the jumpmaster issues the verbal command "STAND BY" the arms are extended down to the sides at a 45-degree angle.

9) "GO"

a. The jumpmaster will give the first jumper a sharp tap on the buttocks while sounding off with the command "GO".

ONLY PLURAL JUMP COMMAND

- 5) Check Static Lines

TWO COMMANDS THAT MAY BEGIN IN DIFFERENT POSITIONS

- 4) Hook Up
- 6) Check Equipment

AT THE 10 MINUTE TIME WARNING

- The Jumpmaster hooks up, faces his stick of jumpers and begins jump commands

AT THE 20 MINUTE TIME WARNING

- The Jumpmaster positions door bundle
- hooks up door bundle to outboard anchor line
- inspects door bundle
- Safety personnel hook up special items of equipment to their respective jumpers

**SEQUENCE OF EVENTS**

Load Master: "Jumpmaster, you have 10 minutes"

Jumpmaster stands up, hooks up, moves to the aft end of the AC and turns and faces their stick of jumpers

Jumpmaster:

"Safety, control my static line"

"10 minutes"

1st jump command: "Get Ready"

2nd jump command: "Out board personnel, stand up"

3rd jump command: "Inboard personnel, stand up"

4th jump command: "Hook up" signals 3x

- Safety "stows and goes", checks static lines from point of attachment, 4" in hand, 2" below, Never on the double sewn portion, trace back to the 1st stow. Ensures jumpers know to make eye to eye contact with him and hand the static line to him, also ensures jumpers elbows are raised to keep the static line from becoming misrouted under their arm.

5th jump command: "Check static lines" signals 3 times

6th jump command: "Check equipment" signals 3times

- Look left/right once all movement has ceased issue thumbs up to other JM and then checks their own equipment.

7th jump command: "Sound off for equipment check"

- drop hands and wait for the #1 jumper to announce "ALL OK, JUMPMASTER" Acknowledge the #1 jumper by slapping his hand, re-grasp static line from safety and take #1 jumper position. Ensure you have 3 points of contact

Load Master: "Army, Your Door"

**DOOR CHECK PROCEDURE**

Grasp lead edge of jump doors, make eye to eye contact with safety and say "Safety, control my static line", rotate into the door centering your body without any portion of the feet touching the jump platform.

Safety controls the JM's static line and observes their stick of jumpers for any emergencies; he also stays aware of the JM and Load Master

1) Ensure PIP pin is in place, re-grasp lead edge
2) Kick lead down lock with lead foot , place foot back in starting position
3) Kick trail down lock with trail foot, place trail foot on center of platform without touching any part of the yellow painted portion. Shift weight to trail foot and ensure the jump platform will hold the jumper's weight. This is the "Door Relaxed Position" from which you will perform the remainder of your duties up to the time of placing door bundles or jumpers in the door.
4) Trace trail edge of the door, Start at the top, trace down to the trail down lock, then back to top, re-grasp trail edge
5) Wind deflector: Lean head towards trail edge, look in direction of flight and nod their head three times
6) Clear to the rear: Bend forward at the waist to an elbow locked position, keeping both heels flat, and observe to the rear of the AC, return back to the Door Relaxed Position and observe for check points

1st check point: Face stick of jumpers, lock out elbow and sound off with "1 Minute"

2nd check point: Face stick of jumpers, lock out elbow and sound off with "30 Seconds"

7) Final Clear to the rear, bend forward at the waist to an elbow locked position keeping both heels flat on the floor and observe to the rear of the AC, return back to the Door Relaxed Position, bob your head and count to 10
8) Maintain a firm handhold on the trail edge of the door, step off the jump platform and rotate in towards the center of the cargo compartment, make eye to eye contact with other JM and issue a thumbs up

8th jump command: "Stand By",

- Move towards the center of the AC , bisect the lead edge of the door with your chest, and issue "Stand by" and regain control of your static line from the safety

Safety personnel will grasp the #1 jumper's static line with the lead hand and pass it to the trail hand and control it until the jumper exits

9th jump command: "GO"

- PJ will continue to observe the jump caution lights, AJ will observe the PJ by looking over his non static line shoulder. Once the jump caution lights turn green, PJ will issue the command "GO" to his #1, the AJ after seeing the PJ issue the command will turn, point at the light, and then issue "GO" to his #1

Once the AJ's last jumper has cleared the door, the AJ will transfer control of his static line to the safety, center himself in the jump door, recheck jump caution lights (point at it) and exit.

The PJ, after seeing the AJ clear their door, will turn, transfer control of his static line to the safety, center himself in the jump door, recheck jump caution lights (point at it) and exit.

Safety personnel will perform a clear to the rear by placing their trail foot on the center of the jump platform and bending forward at the waist to an elbow locked position keeping both heels flat on the floor and check to the rear of the AC, then maintaining a firm handhold on the trail edge both safeties will rotate out of the jump door stepping off the platform, make eye to eye contact with each other and give each other the thumbs up signal, then with the help of the Load Master and or Static line retrieval system pull in all static lines and deployment bags.

**DOOR BUNDLE INSPECTION**

1) Point of attachment to AC- Clevis: ensuring it has a clevis, clevis pin, safety wire and lanyard or cotter pin bent around and has metal to metal contact.
2) Static line: ensuring it is not burned cut or frayed and is not misrouted through any stow bar, proper pack opening loop, proper pack closing tie.
3) Drogue Device: reach under pack opening flap and locate drogue device 1 for C130, 2 for C17 and 3 for C5, satisfied its present and secure replace it back under pack closing flap.
4) Point of Attachment of the Cargo Parachute to the Door Bundle- Risers: ensuring they are properly secured with clevis, clevis pin, safety wire and lanyard or cotter pin firmly seated and bent around so it has metal to metal contact.
5) 4 tie downs of the pack tray: ensure they are properly secured and tied off with a bow knot
6) Overall inspection of the Door Bundle: ensure no loose or excess webbing
7) Finally smack the smooth side of the Door Bundle ensuring it faces the trail edge of the door.

Once the Door Bundle has been jettisoned and the static line of the cargo parachute is riding high, the JM will count aloud to 3 thousand, move towards the center of the AC , bisect the lead edge and issue the 8th jump command "Stand By", recheck jump caution lights and if still green, issue the 9th jump command "GO"

# T-10 Hollywood JMPI Sequence

**3 August 2011**

**Note: As you are routing the Universal Static Line over the appropriate shoulder for which the jumper will exit, look at the riser assemblies to ensure that the type of parachute being inspected either has or does not have blue confluence wrap.**

**BALLISTIC HELMET (FRONT):**

The jumpmaster will move to their jumper and issue the command, "**Open your rip cord protector flap**." The Jumpmaster will place both hands on the extreme right hand side of the ballistic helmet; fingers and thumb extended and joined, fingers pointed skyward, palms facing the jumper. The left hand is the control hand. The right hand is the working hand. With the working hand, trace across the rim of the ballistic helmet to the opposite side, inspecting for any sharp or protruding edges that may damage or cut the jumpers static line upon exiting the aircraft. Once the hands are parallel, insert the thumb of each hand under the rim of the ballistic helmet and feel for the locking nut to ensure that they are present and secured. Tilt the jumper's head to the rear and look at the headband. Ensure the smooth leather portion of the headband is toward the jumper's head and that the securing tabs are present and secure. Place the right index finger on the pull the dot fastener with tab. Ensure that it is a serviceable pull the dot fastener with tab, in that it has four plies of nylon in the tab portion, three of which must run through the snap portion and the snap portion is secured. Bypass the pull the dot fastener with tab and trace down to the point of attachment for the chinstrap. Ensure the chinstrap is properly routed through the adjusting buckle, and that the parachutist retention strap is routed around the chinstrap, under the adjusting buckle and the pile portion of the parachutist retention strap is away from the jumpers face. Trace the long continuous portion chinstrap under the jumpers chin to its point of attachment on the opposite side and conduct the same inspection. Now place the index finger of the right hand on the inside of the nylon portion of the adjusting buckle and trace it up until you make skin to skin contact with the left thumb still in place on the locking nut. Trace the short sewn portion chinstrap across the front of the jumpers chin and drop both hands.

**ADVANCED COMBAT HELMET (FRONT):**

The jumpmaster will place both hands on the right side of the ACH; fingers and thumbs extended and joined pointing skyward, palms facing the jumper. The left hand is the control hand; the right hand is the working hand. With the working hand trace across the rim of the ACH feeling for any sharp or protruding edges that may cut or damage the jumper's static line upon exiting the aircraft. Once the hands are parallel place the thumbs on the rim of the ACH, tilt the jumpers head to the rear. Conduct a visual inspection to ensure the three suspension pads are present, are flush with the outer rim, and the oval pads are covering the bolt ends.

Place the right index finger on the front left adjustable buckle to ensure it is free of all cracked components and is serviceable, and the front left adjustable strap is properly routed through it and the free running end is secured in the webbing retainer. Now trace the front left adjustable strap down to the chinstrap fastener, ensuring it is free of all cracked components and properly secured. Now bypass the chinstrap fastener and trace the long portion chinstrap, under the jumpers chin to where it is sewn into the front right adjustable strap to ensure it is not twisted, cut or frayed. Now trace the front right adjustable strap up to the front right adjustable buckle to ensure it is free of all cracked components and is serviceable, and the free running end is secured in the webbing retainer. With the right index finger place it on the short portion chinstrap on the right side and trace the short portion chinstrap across the front of the jumper's chin drop both hands.

**CANOPY RELEASE ASSEMBLIES:**

Then next item of equipment we will discuss are the canopy release assemblies. We will always start with the canopy release assembly opposite the Universal Static Line. Since the Universal Static Line is routed over the jumper's right shoulder, we will begin the inspection with the jumper's left canopy release assembly. Look at the left canopy release assembly; tap it with the knuckles of the right hand one time to ensure that it sounds solid. (**Jumpers, this is your key to place both hands on your ACH/Ballistic Helmet).** With your right hand form a knife cutting edge, fingers extended and joined, palms facing towards you, and insert it behind the main lift web in the vicinity of the chest strap. Trace up the main lift web until your right index finger makes contact with the canopy release assembly pad. Place your right thumb on the outside corner of the canopy release assembly, and rotate it ¼ turn to the

outside. With your head and eyes approximately six to eight inches away conduct a visual inspection to ensure that the male fitting canopy release assembly is properly secured by the female fitting canopy release assembly, and properly secured by the latch. Ensure the cable loop is properly secured by the safety clip and the canopy release assembly is free of all dirt or foreign material that will keep it from seating completely. Now let the canopy release assembly return back to its normal position. Keep your right hand in place, as you can see jumpmasters, the universal static line is routed over the jumper's right shoulder; therefore it is in your line of sight to inspect the right canopy release assembly. With your left hand secure the universal static line and rotate it over to your right thumb and secure it in place. Form a fist with your left hand and with the knuckles of your left hand lightly tap the canopy release assembly; you should hear a solid metallic sound. With your left hand form a knife cutting edge, fingers extended and joined palms facing towards you the jumpmaster and insert it behind the main lift web in the vicinity of the chest strap ejector snap. Trace up the main lift web until your left index finger makes contact with the canopy release assembly pad. Place your left thumb on the outside corner of the canopy release assembly and rotate it ¼ turn to the outside, and conduct the same inspection. Now let the canopy release assembly return back to its original position.

**CHEST STRAP:**

Simultaneously slide both hands down the main lift web until the little fingers make contact with either one of the D-rings. Look at the chest strap to ensure that it has not been misrouted around the main lift web. Insert the right hand, fingers and thumb extended and joined, fingers pointed skyward, palm facing the jumpmaster from bottom to top behind the chest strap next to where it is sewn into the main lift web. Trace the chest strap across, conduct a visual inspection to ensure the chest strap is not twisted, cut, or frayed and the excess webbing of the chest strap is properly secured in the webbing retainer until the right hand is behind the ejector snap, ensure the ejector snap pad does not come between the right hand and the ejector snap. With the thumb of the right hand, press in on the activating lever of the ejector snap to ensure that it is properly seated over the ball detent and is free of all foreign matter. Leave the right hand and thumb in place, and move to the right side of the jumper.

**WAIST BAND:**

Insert the left hand, fingers and thumb extended and joined fingers pointed skyward, palm facing the jumpmaster, from the bottom to the top behind the waistband next to where it sewn into the pack tray. Look at the waistband where it is sewn into the pack tray and ensure that at least 50% of one row of stitching is present. Trace the waistband forward to ensure that it is not twisted, cut, frayed or been misrouted behind the horizontal back strap. Trace the waistband forward until the left hand makes contact with the right D-ring. Look at the waistband to ensure that it is routed over the right main lift web and under the right D-ring. Rotate the right hand down and grasp the top-carrying handle of the reserve parachute, palm facing the reserve. Simultaneously lift up and out on the reserve parachute and place the left hand, palm facing the jumper, into the jumper's chest. Look at the waistband where it is routed behind the reserve parachute to ensure that it is routed through both waistband retainers and it is not twisted, cut, or frayed. Withdraw the left hand from the jumper's chest, reach under the right forearm, and insert the left hand into the left carrying handle of the reserve parachute, palm facing away from the reserve with the fingers spread. With the right hand, release the top carrying handle of the reserve parachute and move to the left side of the jumper. Insert the right hand, fingers and thumb extended and joined, fingers pointed skyward, palm facing the jumpmaster, from the bottom to top behind the waistband as close as possible to the left D-ring. Look at the waistband to ensure that it is routed over the left main lift web and under the left D-ring. Trace the waistband back to the metal adjuster, insuring that it is not twisted, cut or frayed. Leave the right hand in place behind the metal adjuster. Remove the left hand from the left carrying handle of the reserve parachute and insert the index finger and middle finger of the left hand from top to bottom into the quick release formed by waistband. Ensure that it is no more than three fingers, no less than two, and that it is not a false quick release. Remove the index finger and middle finger from the quick release and with the index finger and thumb of the left hand pinch off the free running end of the waistband where it comes out of the metal adjuster. Trace the free running end of the waistband until the fingers fall of the end, insuring it is not cut, torn, or frayed, and is easily accessible to the jumper. Reinsert the left hand into the left carrying handle of the reserve parachute with the palm facing away from the reserve and fingers spread. Look at the right hand and trace the waistband adjuster panel back to where it is sewn into the pack tray insuring that it is not twisted, cut, frayed or been misrouted behind the horizontal back strap. Look at the waistband adjuster panel where it is sewn to the pack tray and ensure that at least 50% of one row of stitching is present. Drop both hands and move to the front of the jumper.

**RESERVE (SLCP)**

With the left hand grasp the top carrying handle of the reserve parachute, palm facing the reserve and lift up and out. Look at the left connector snap and with the index finger of the right hand, finger the left connector snap one time to ensure that it is properly secured to the left D-ring, has spring tension, and has not been safetied. Grasp the top carrying handle of the reserve parachute with the right hand, palm facing the reserve and lift up and out. Look at the right connector snap and with the index finger of the left hand, finger the right connector snap one time to ensure that it is properly secured to the D-ring, does not have spring tension, and has been safetied. You will now inspect the safety wire and lanyard by using the letters **PLF**, **pull, look** and **feel.** With the left index finger, form a hook around the lanyard portion of the safety wire and lanyard. **Pull** on the lanyard portion to ensure it is secured to the reinforced nylon webbing on the right rear portion of the reserve parachute, and to the coiled portion of the safety wire. **Look** at it to ensure the lanyard is constructed of type II or type III nylon cord gutted, and the safety wire is routed from outside to inside through the small hole in the right connector snap. With the index finger of your left hand insert it from top to bottom and **Feel** the safety wire on the inside of the right connector snap to ensure it is bent down at a 90 degree angle, and that the safety wire is routed between the waistband and the reserve parachute, and not the waistband and the jumper's body. Keep your left index finger in place. The jumpmaster will place their right hand on the left end panel of the reserve parachute, then form a knife cutting edge with your left hand, fingers and thumb extended and joined pointed down, palm facing the jumpmaster; and sweep one time from the jumper's left to right behind the rip cord grip. Ensuring the top left and top right pack opening spring bands have not been misrouted over the ripcord grip. Form a fist with your left hand leaving the index finger exposed and insert it behind the ripcord grip retainer, ensuring that the ripcord grip is routed between the top panel and the rip cord grip retainer and not the ripcord retainer and the pile tape. Remove the left index finger and place it on the right steel swaged ball to ensure that it is present and against the ripcord grip and it is not cracked or corroded. With the index finger and thumb of your left hand pinch off the right cable where it emerges from the ripcord grip and trace it down until you come in contact with the locking pin, ensuring the cable is not kinked or frayed and it is properly routed over the pile tape. Continue to trace down the locking pin until you come to the end, ensuring the locking pin is not bent, cracked, or corroded. Leave your left index and thumb on the end of the right locking pin, and make a visual inspection of the red soft loop, to ensure it is not cut, frayed, burned or twisted and the locking pin is routed through it completely and not puncturing it. Place your right index finger on the left steel swaged ball and conduct the same inspection. Now place either hand on an end panel, and with the index finger and thumb of the other hand, pinch off the ripcord protector flap making a visual and physical inspection of the Army Parachute Log Record to ensure that it is present. Close the ripcord protector flap and make a visual inspection to ensure a piece of ¼ inch yellow binding tape is permanently sewn across the top of the ripcord protector flap. With either hand feel for the bulge created by the deployment assistance device to ensure it is centered behind the ripcord protector flap. The pack opening spring bands must be inspected for exposed metal, spring tension, and proper routing. Form a knife edge with the left hand, fingers and thumb extended and joined, palm facing you the jumpmaster and sweep the top carrying handle and universal static line snap hook back toward the jumper, this will be control hand. Begin the inspection of the pack opening spring bands with the top right pack opening spring band. With the index finger and thumb of the right hand pinch off the tab portion of the top right pack opening spring band and pull it down toward the ripcord protector flap. Look at the pack opening spring band to ensure that it is routed through the reinforced nylon webbing on the back of the reserve, it is properly routed under the top carrying handle, and there is no exposed metal on the pack opening spring band. When the tab portion of the pack opening spring band is released the pack opening spring band should pop back into place. Repeat the same inspection for the top left pack opening spring band. With the left hand, form a knife-edge, fingers and thumb extended and joined, palm facing you the jumpmaster, fingers pointing down and sweep the left carrying handle out of the way and inspect the left pack opening spring band. With both hands secure the bottom corners of the reserve parachute and lift it up high so that it is parallel to the ground, and inspect the bottom left then bottom right pack opening spring bands with the right hand. (**On a Hollywood rigged jumper you should be able to see the waistband behind the reserve parachute.)** Remove your left hand from the bottom right corner of the reserve parachute; it should go back to its normal position. With your left hand form a knife cutting edge fingers extended and joined, palm facing toward you, the jumpmaster, and sweep the lanyard portion of the safety wire and lanyard out of your line of sight, and inspect the right pack opening spring band. An overall inspection of the reserve parachute must now be conducted to ensure that it is free of grease, oil, dirt, mud, tears, and exposed canopy. Now with both hands form a knife cutting edge, fingers extended, with your fingertips facing toward the jumper's body and place the palms of your hands on the top right corner of the reserve parachute. Your left hand is your control hand and your right hand is your working hand. Keep your left hand in place. With your head and eyes approximately six to eight inches away, focus your attention on your right hand and trace the top panel of the reserve, now trace down the left end panel of the reserve parachute insuring your pinkie finger

leads the way. When you reach the bottom left panel of the reserve parachute with your working hand, drop your control hand down to the bottom right corner of the reserve parachute and lift the reserve parachute up high, ensuring your left hand does not cover up the seam on the reserve parachute, your thumb should be touching the reinforced webbing on the bottom right corner and finger tips pointing the ripcord protector flap. Hold the reserve parachute up with your control hand so it is parallel to the ground. With your working hand, trace the bottom panel of the reserve parachute insuring your index finger is leading the way, when your working hand makes contact with your control hand, drop your control hand leaving your working hand in place on the bottom right corner of the reserve parachute and let the reserve parachute fall back to its normal position. Move your control hand back to the top right corner of the reserve parachute, ensuring that you do not cover the seam on the reserve parachute, and with your head and eyes approximately four to six inches away, trace up the right end panel of the reserve parachute insuring your pinkie finger leads the way conducting a visual inspection. Once your working hand makes contact with your control hand, you will lift control hand up ensuring that your working hand traces where your control hand just was. Now issue the jumper the command of,

**"Hold, squat**."

**LEG STRAPS:**

Insert the index finger and middle finger of each hand from outside to inside behind the leg straps under the aviator's kit bag where the natural pocket is formed. Simultaneously slide both hands rearward on the leg straps tracing back to the saddle, insuring that the leg straps are not crossed. Keep your right hand in place. With the left hand trace the right leg strap up to the quick fit V-ring insuring that it is not twisted, cut, or frayed and the excess webbing is secured in the webbing retainer. With the thumb of the left hand press in on the activating lever of the right leg strap ejector snap to ensure that it is properly seated over the ball detent and is free of all foreign matter. Leave the left hand and left thumb in place and look at the left leg strap. With the right hand trace the left leg strap up to the quick fit V-ring insuring that it is not twisted, cut, or frayed, excess webbing is secured in webbing retainer, and it is properly routed through the exposed carrying handle of the aviator's kit bag, over the bottom and under the top. With the thumb or index finger of the right hand press in on the activating lever of the left leg strap ejector snap to ensure that it is properly seated over the ball detent, and is free of all foreign matter. Look at the aviator's kit bag to ensure that it is present, has not been reversed and the sewn re-enforced portion is facing away from the jumper. Once satisfied with the inspection, stand up in front of your jumper. **(Hollywood jumpers will automatically recover.)**

**UNIVERSAL STATIC LINE:**

Reach across your body with your right hand and grasp the Universal Static Line Snap Hook. Pull up on the universal static line snap hook to ensure it is that it is secured to the top carrying handle of the reserve parachute, spring opening gate facing towards the jumper. Open the right hand and let the universal static line snap hook rest in the palm. Place the index finger of the left hand on the girth hitch of the universal static line. Ensure the green marking stitching is present and the girth hitch is routed around the narrow portion of the universal static line snap hook With your left index finger trace down the universal static line snap hook until your left index finger makes contact with the rivet pin, ensure it is secure and free of rust and corrosion. With the right hand, re-grasp the universal static line snap hook and hold it perpendicular to the reserve parachute with the spring opening gate facing toward the jumper. With the left hand, palm facing the jumper, thumb pointing downward, grasp the universal static line just above the universal static line snap hook. Rotate the universal static line down and to the jumper's right and push it toward the universal static line snap hook. Inspect the inside of the girth hitch for the first time to ensure it is free of all cuts frays and burns. With the index finger or thumb of the right hand push the girth hitch back towards the universal static line snap hook and again inspect the inside the girth hitch for the second time for any cuts frays or burns. Redress the girth hitch down around the narrow portion of the universal static line snap hook and release the universal static line with the left hand. Since the universal static line is routed over the jumper's right shoulder, with the index finger and thumb of the right hand, form an "O" around the universal static line just above the universal static line snap hook, you should see metal. Raise the right hand up simultaneously inspecting the static line as it passes through the "O" formed by the right hand to ensure that it is free of all cuts, frays, and burns. When the right hand has been raised as high as it can go issue the jumper the command "**turn**." Once the jumper has completed the turn, the right hand should have been raised high enough so as to pull all of the slack from the static line slack retainer. Keep the universal static line tight between the control hand and the first stow, place the index finger, or index finger and the middle finger of the working hand behind the universal static line below the control hand so there is skin to skin contact. Trace the universal static line down to the first stow insuring that it is free of all cuts, frays, and burns and it has not been misrouted under or through either riser assembly. With either hand, form a bight in the universal static line and look at the static line slack retainer. Ensure the static line slack retainer it is not cut, torn or frayed more than 50%, if it

is it renders the parachute unserviceable and must be turned in. Then insert the bight from top to bottom through the static line slack retainer and pull all excess universal static line through. Flip the bight on top of the pack tray and place either hand on it. The hand that controls the bight becomes the control hand. With the index finger and thumb of working hand pinch off the first stow and pull it one or two inches toward the center of the pack tray. Look behind the stow to ensure that the universal static line has not been misrouted around the static line stow bar and it is free of cuts, frays, or burns. Release the first stow and let it pop back into place. Insert the index finger of the working hand from bottom to top behind the first strand of universal static line as close as possible to the first stow. Trace the first strand of universal static line over to the second stow to ensure that it is free of all cuts, frays, and burns. Once contact is made with the second stow, pinch it off with the index finger and thumb of the working hand pull it one to two inches toward the center of the pack tray and conduct the same inspection. Place the index finger or thumb of the working hand behind the second strand of universal static line and trace it away from you insuring it is not cut, frayed, or burned. Continue to inspect the universal static line in the same manner all the way down to the pack opening loop insuring that you inspect the last strand of static line with the index finger only and the last strand of universal static line is routed from the right outer static line stow bar.

Note: When tracing towards yourself, you must use the index finger only.

**PACK OPENING LOOP; PACK CLOSING LOOPS, PACK CLOSING TIE:**

Once contact is made with the pack-opening loop, ensure that it is situated between the pack closing loops at the 6 and 9 o'clock position. Insert the index finger of the working hand from bottom to top into the pack-opening loop. Pull down and out on the pack opening loop, look inside the pack opening loop to ensure the pack closing tie has been routed through the pack opening loop and that the pack opening loop is not torn or frayed at all. Let the pack opening loop pop off your finger. Place the index finger of the working hand on the pack-closing loop at the six o'clock position. Look at the pack closing loop to ensure the pack closing tie is routed through the pack closing loop and the pack closing loop is not torn or frayed more than 50% at the looped portion. Inspect the remaining pack closing loops in the same manner using a clockwise motion, 9 o'clock, 12 o'clock, and 3 o'clock. If the Universal static line is covering either of the pack closing loops it must be moved by the index finger of your working hand so it does not impede your inspection. Look at the pack closing tie and the surgeon's knot locking knot. Ensure the surgeon's knot locking knot is properly positioned between the pack closing loops at the 3 o'clock and 6 o'clock position. Insert the index finger of working hand from bottom to top behind the surgeon's knot locking knot and pull down and out, to ensure it is secure and that the pack closing tie has been properly constructed of one turn and one turn only of ¼ inch cotton webbing. Let the pack closing tie pop off the end of your finger. Drop both hands and stand up behind your jumper.

**BALLISTIC HELMET (REAR):**

Place both hands on the rim of the ballistic helmet on the extreme left-hand side, fingers and thumb extended and joined, fingers pointing skyward, palms facing the jumper. The left hand is the control hand and the right hand is the working hand. With the working hand trace the rim of the ballistic helmet across to the opposite side, ensuring there are no sharp or protruding edges that may cut or damage the jumper's static line upon exiting the aircraft. Once the hands are parallel, place the thumb of each hand on the rim of the ballistic helmet and tilt the jumper's head forward. Look at the parachutist retention strap to ensure that it is properly routed between the shell of the ballistic helmet and the foam impact pad and that the parachutist retention strap is not twisted. With the index finger and thumb of either hand, pinch off the foam impact pad and pull down slightly to ensure that it is secured to the shell of the ballistic helmet and that it is serviceable.

**ADVANCED COMBAT HELMET (REAR):**

The jumpmaster places both hands on the left side of the ACH, fingers and thumbs extended and joined fingers pointing skyward, palms facing the jumper. The left hand is the control hand; the right hand is the working hand. With the working hand trace the rim of the ACH feeling for any sharp or protruding edges that may cut or damage the jumper's static line upon exiting the aircraft. Once the hands are parallel place the thumbs on the rim of the ACH and tilt the jumper's head forward. Conduct a visual inspection to ensure the oval pads are covering the bolt ends, they are flush with the rim of the ACH and the rear trapezoid pad is flush or protruding slightly past the rim of the ACH, no more than ½ inch.

Place the right index finger on the rear right adjustable buckle to ensure the rear right adjustable strap is properly routed through it and free of all cracked components and the free running end is secured in the webbing retainer. Now trace the rear right adjustable strap down until contact is made with the long portion chinstrap to ensure it is not twisted cut or frayed. Leave the right index finger in place; now place the left index finger on the rear left adjustable buckle and conduct the same inspection. Leave the left index finger in place. Conduct a visual inspection of the nape pad to ensure it is present, secure, serviceable, and has not been reverse.

**RISER ASSEMBLIES:**

Reach as far forward over the jumper's shoulders as possible and with each hand grasp a riser assembly, thumbs down, knuckles skyward, just above the canopy release assemblies. Since these are like items of equipment, either riser assembly can be inspected first, however for this talk through we will begin the inspection with the left riser assembly. Give the left riser assembly a sharp **TUG** to the rear. **OPEN** the left hand to form an "L". Apply upward pressure with the left thumb and **TRACE** the riser assembly rearward to where it disappears into the main pack tray, insuring it is not twisted, cut, or frayed. Leave the left hand in place and with the right hand conduct the same inspection on the right riser assembly. You must ensure an Army Parachute Log Record is present in either riser assembly.

**PACKTRAY:**

An overall inspection of the pack tray must be conducted to ensure the pack tray is free of grease, oil, dirt, mud, or tears. Place both hands on the top left corner of the pack tray, palms facing the pack tray, fingers and thumb extended and joined. The left hand is the control hand and the right hand is the working hand. Ensuring the pinkie finger leads the way. With the head and eyes 6 to 8 inches away from the working hand trace across the top pack closing flap, down the right pack closing flap, across the bottom pack closing flap, as you trace the bottom pack closing flap ensure you lower your head so you are able to see the bottom, flip the right hand over and trace up the left pack closing flap. When the working hand makes contact with the control hand, raise the control hand out of the way and trace across the top left corner of the pack tray where the control hand had been. Form knife-edges with both hands, palms facing the jumpmaster and issue the command "**arch your back**".

**DIAGONAL BACKSTRAPS:**

Insert each hand under the X formed by the diagonal back straps. Look at the diagonal back straps to ensure they have been properly routed over the appropriate shoulder, and that the top diagonal back strap has one more row of exposed stitching than the one on the bottom. Look at the diagonal back strap retainers to ensure they are routed through the sizing channels on the diagonal back straps. The diagonal back strap retainers are routed around the diagonal back strap keepers and the pull the dot fasteners are secured. To further ensure the pull the dot fasteners are secure, with both thumbs; **PLUCK** the tab portion on the pull the dot fasteners upward. **(Instructors go and make sure that all students understand Plucking, PLUCK certified)** Focus your attention on the left hand and the left side of your jumper. With the left hand, trace down the diagonal back strap to the back strap adjuster, insuring that it is not twisted, cut, or frayed. Grasp the back strap adjuster with the left hand and focus your attention on the right side of your jumper. With the right hand, trace down the diagonal back strap, insuring it is not twisted cut or frayed, bypass the back strap adjuster and pick up the inspection of the horizontal back strap.

**HORIZONTAL BACKSTRAPS:**

Trace the horizontal back strap down to where it disappears into the main lift web, ensuring that it is not cut or twisted and the excess webbing is secured in the webbing retainer. Withdraw the right hand from under the horizontal back strap, and reinsert it, fingers and thumb extended and joined, fingers pointing skyward, palm facing the jumpmaster, from bottom to top behind the horizontal back strap where it reemerges from the main lift web, your index finger should make contact with the main lift web, once the index finger has made contact with the main lift web, issue the jumper the command "**BEND."** Place your left shoulder on the bottom pack closing flap and push up on the bottom of the pack tray. Simultaneously, with your left hand pull down on the back strap adjuster. With your head and eyes approximately six to eight inches away trace the horizontal back strap across the small of the jumper's back, until your right pinkie finger makes contact with the main lift web on the jumpers left side.

Your inspecting the horizontal back strap to ensure that horizontal back strap is not twisted, cut or frayed, and that the horizontal back strap retainer is routed under and over the horizontal back strap keeper and secured to itself with a pull the dot fasteners and that nothing is misrouted behind the horizontal back strap

Now remove your right hand from behind the horizontal back strap form a knife cutting edge fingers extended and joined and insert it from outside to inside or inside to outside where the horizontal back strap re-emerges just above the waistband adjuster panel on the jumpers left side. Trace up the horizontal back strap until your right hand makes contact with your left hand which should still be in place around the back strap adjuster on the jumpers left side, inspecting the horizontal back strap ensuring that it is not twisted, cut, or frayed, and that the excess webbing is secured inside the webbing retainer and that nothing is misrouted behind the horizontal back strap

Withdraw the right hand from behind the horizontal back strap and get left hip to left hip with the jumper.

**SADDLE:**

Place the finger tips of the right hand, fingers and thumb extended and joined, fingers pointed down, palm facing the jumper just below the triangle link on the single "X" boxed stitch under the left triangle link. Trace the saddle across the jumpers buttocks insuring that the saddle is not twisted, cut, frayed, been inverted, or that neither leg strap has been misrouted around the saddle. Trace the saddle until contact is made with the single "X" boxed stitch under the right triangle link. Reach back and get a hand full of air and issue the jumper that good seal of approval by tapping the jumper on the buttocks, and issue command of **"RECOVER"**

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# T-10 Combat Equipment JMPI Sequence

**3 August 2011**

**COMBAT EQUIPMENT:**

The inspection of a combat equipped jumper is the same as the Hollywood jumper down to the waistband, so the jumpmaster will start the inspection at the waistband. Place the right hand behind the ejector snap of the chest strap, right thumb in place on the activating lever. Move to the right side of the jumper. Insert the left hand, fingers and thumb extended and joined, fingers pointing skyward, palm facing the jumpmaster, from bottom to top behind the waistband next to where it is sewn into the pack tray. Look at the waistband where it is sewn into the pack tray to ensure that at least 50% of one row of stitching is present. Trace the waistband forward, insuring it is not twisted, cut, frayed, or been misrouted behind the horizontal back strap. Continue tracing the waistband forward until contact is made with the right D-ring. Look at the waistband to ensure it is routed over the right main lift web and under the right D-ring. Rotate the right hand down and grasp the top carrying handle of the reserve parachute, palm facing the reserve, knuckles skyward. Simultaneously lift up and out on the reserve parachute and place the left hand in the center of the jumper's chest, palm facing the jumper. Look at the waistband where it is routed behind the reserve parachute to ensure it is properly routed through both waistband retainers and is not twisted, cut, or frayed. Withdraw the left hand from the jumper's chest, reach under your right forearm and insert your left hand into the left carrying handle of the reserve parachute, palm facing away from the reserve with your fingers spread. With the right forearm, push out on the lead edge of the M1950 weapons case for the first time. Look at the waistband to ensure it is routed over the left main lift web and under the left D-ring. With the right hand, grasp the trail edge of the M1950 weapons case and pull it forward. Insert the right hand, fingers and thumb extended and joined, fingers pointed skyward, palm facing the jumpmaster, from bottom to top behind the metal adjuster. Remove the left hand from the left carrying handle of the reserve parachute and insert the index finger and middle finger of the left hand from top to bottom into the quick release formed by the waistband. Ensure that it is no more than three fingers, no less than two, and that it is not a false quick release. Remove the index finger and middle finger from the quick release and with the index finger and thumb of the left hand pinch off the free running end of the waistband where it comes out of the metal adjuster. Trace the free running end of the waistband until the fingers fall of the end, insuring it is not cut, torn, or frayed and is easily accessible to the jumper, exaggerating your trace. Reinsert the left hand into the left carrying handle of the reserve parachute with the palm facing away from the reserve parachute with fingers spread. Look back at the right hand, which should still behind the metal adjuster and trace the waistband adjuster panel back to where it is sewn into the pack tray insuring that it is not twisted, cut, or frayed. Look at the waistband adjuster panel where it is sewn to the pack tray and ensure that at least 50% of one row of stitching is present. Maintain control of the left carrying handle with the left hand, remove your right hand and move back to the front of the jumper. With the right forearm, push out on the lead edge of the M1950 weapons case for the second time.

**M1950 WEAPONS CASE:**

The M1950 weapons case will be inspected in its entirety prior to inspecting the reserve parachute. The inspection of the M1950 weapons case begins with its point of attachment, the quick release snap, on the left D-ring. Look at the opening gate of the quick release snap to ensure that the opening gate is facing the jumper's body and it is the outermost item on the left D-ring unless the harness is not equipped with the triangle links. With the right index finger, finger the opening gate one time to ensure that it is properly attached to the left D-ring, it has spring tension and it has not been safetied. With the heel of the right hand press up on the activating arm of the quick release snap to ensure that it is seated between the ball detents. With the index finger of the right hand, trace down until contact is made with the V-ring. Ensure the quick release link is routed through the V-ring, and the quick release link is secured by the rotating claw. Continue to trace down the inside of the M1950 weapons case until contact is made with the adjusting strap. Ensure the adjusting strap is routed through the appropriate set of adjusting strap connectors, secured by means of a half hitch and is not twisted, cut or frayed. Continue tracing down the adjusting strap to where it is sewn to the M1950 Weapons Case. Form a knife-edge with your right hand, palm facing skyward and trace from front to rear along the bottom of the M1950 weapons case to ensure the muzzle of the weapon is not protruding. Place the index finger of the right hand on the slide fastener at the bottom of the closing flap. Ensure the slide fastener is secure by tracing up the outside of the M1950 weapons case. Bypass the lower tie down strap and continue to trace up to the vicinity of the lift fastener inspecting to ensure all teeth are engaged. With the index finger of the right hand, secure the tab thong portion. Pull down and out to ensure the slide fastener and tab thong is secured by the upper tie down tape or been separated over the lift fastener, never both. **(However, while here at this Jumpmaster Course it will be secured by Upper**

**tie down tape)** Drop the right hand down 10 to 12 inches from the top of the M1950 weapons case and give it a sharp slap, feeling for the forward assist of the M16 series rifle or the charging handle of the M249 SAW. **(Allow Jumpmaster's time to find the forward assist)** With the index finger and thumb of the right hand, pinch off the single or double loop bowknot of the upper tie down tape on the lead edge of the M1950 weapons case. Visually inspect the upper tie down tape to ensure it is properly routed behind the M1950 weapons case, around the main lift web, above the chest strap, and secured by a single or double looped bowknot. This concludes the inspection of the M1950 weapons case. With the left hand, grasp the top carrying handle of the reserve parachute palm facing the reserve parachute and lift up and out. Inspect the reserve parachute in the same manner as if it were on a Hollywood jumper all the way until you issue the jumper the command of "**hold**."

**ALICE PACK:**

Now you will begin the inspection of the Harness Single Point Release beginning with the adjustable D-ring attaching straps. These are like items of equipment so either one can be inspected first, however for the purpose of this talk through you will begin with the right adjustable D-ring attaching strap. Simultaneously, with both hands form fists with your index fingers exposed. Place your index fingers on the snap hooks of the adjustable D-ring attaching straps. Now focus your attention to your left hand. Conduct a visual inspection to ensure that the snap hook is not been, cracked, corroded or distorted out of shape and that the opening gate is facing towards the jumper, and it is located to the outside of the connector snap. With the index finger of the left hand, finger the opening gate one time to ensure that it is properly secured to the right D-ring, and it has spring tension. With the left thumb flip the free running end of the right adjustable D-ring attaching strap out of the way. Place the index finger of the left hand on the front of the right adjustable D-ring attaching strap just below the snap hook. Trace down the right adjustable D-ring attaching strap until contact is made with the triangle link, insuring that the right adjustable D-ring attaching strap is not twisted cut, or frayed. Bypass the triangle link and pick up the inspection of the white attaching loop in front of the triangle link. With the left index finger, trace down the attaching loops to ensure that the white attaching loop is routed from bottom to top through the triangle link, the green attaching loop has been routed from bottom to top through the white attaching loop, the red attaching loop is routed from bottom to top through the green attaching loop, and routed from bottom to top through the grommet in the female portion leg strap release assembly. Place the index finger of the left hand on the single "X" boxed stitch on the release handle cross strap. Look at the release handle cable where it emerges from the release handle cross strap. Ensure the release handle cable is properly routed through the red attaching loop and secured by the cable loop retainer. Leave the left index finger in place and with your right hand; conduct the same inspection on the left adjustable D-ring attaching strap. After inspecting the left adjustable D-ring attaching strap, focus your attention on the release handle. With the right index finger and thumb, index finger on top, thumb on the bottom lift up gently on the release handle. Ensure the release handle is properly routed between the two plies of the release handle cross strap and secured by the hook pile tabs. Now form a hook with your right index finger and lift up on the release handle lanyard, to ensure it is not twisted or misrouted around the equipment retainer strap. Place your right index finger back on the single "X" box stitch. Trace the equipment retainer straps down between the external cargo compartments of the ALICE pack until you make contact with the adjustable cross strap. Leave your left index finger in place and with the index finger and thumb of the right hand grasp the free running end of the adjustable cross strap and give it a tug to the jumper's left, insuring that all the slack has been removed from the adjustable cross strap. Now place your right index finger back on the single X box stitch and continue to trace the equipment retainer straps down until your fingers fall off. Now secure the sides of the ALICE pack and raise it to eye level and look at the equipment retainer straps to ensure they are routed behind the envelope cushioned and have not been twisted. Raise the ALICE pack to the jumper and issue the command **"HOLD".**

**(Jumpers you will secure the ALICE pack by the adjustable cross strap and the adjustable cross strap only, and hold it up high.)** You will continue your inspection of the equipment retainer straps as they route under the envelope cushion portion of the ALICE pack. Ensure the equipment retainer straps form an X configuration on the rear of the ALICE pack. Continue your inspection until your fingers rest behind the 2-3 finger quick releases in the equipment retainer straps. As you bypass the girth hitch, make a mental note to ensure it is routed north to south, south to north, never east to west. Simultaneously, you will inspect the 2-3 finger quick release by placing the index and middle finger of each hand, palm facing you, on the outside of the quick release. Now visually inspect the free running ends of the equipment retainer straps to ensure they are S-folded and secured with either masking tape or retainer bands, one or the other, never both and not secured to the quick releases. With the index finger of each hand, lightly tap them to ensure the S-folds are secure**.** Now with the thumb and index fingers of each hand, form an "O" around the lower portion of the adjustable shoulder carrying straps. Simultaneously pull out to ensure they are properly secured to the ALICE pack frame. Visually inspect the free running ends of the adjustable shoulder carrying straps to ensure they are S-folded and secured with masking

tape or retainer bands, one or the other never both. With the index fingers of each hand, lightly tap the free running ends of the adjustable shoulder carrying straps to ensure the S-folds are secure.

**HOOK, PILE, TAPE LOWERING LINE:**

With the index finger of your right hand place it on the Hook Pile Tape Lowering line just to the right of the girth hitch. You will visually inspect to ensure the girth hitch is vertical. With your right index finger trace the Hook Pile Tape Lowering line until you make contact with the first hook pile tabs. As you do this conduct a visual inspection to ensure that the Hook Pile Tape Lowering line is properly routed over the left adjustable shoulder-carrying strap. Ensure it is present and that it is secured. Visually inspect to ensure there are no S-folds protruding from the end of the trainer flap. Continue to inspect down the retainer flap ensuring that it is secured to the ALICE pack frame with retainer bands, one above and one below the horizontal frame support. Continue to trace down until you make contact with the second set of hook pile tabs, once again ensure they are present and secured and there are no S-folds protruding from the end of the retainer flap. Continue to trace the Hook Pile Tape Lowering line until your hand disappears behind the M1950 Weapons case. Visually inspect to ensure the Hook Pile Tape Lowering line is properly routed between the main body of the M1950 Weapons Case and the 1 ply of reinforced nylon webbing. Route your left hand over your right forearm and secure the trail edge of the M1950 Weapons case. Remove your right index finger place it back on the Hook Pile Tape Lowering line where it remerges from the M1950 Weapons Case. Continue to trace up until you make contact with the ejector snap, once the hook pile tape lowering line has been traced to its point of attachment, with the right thumb press in on the activating lever to ensure that it is properly seated over the ball detent and free of all foreign matter and the opening gate is facing the jumper. Turn the ejector snap ¼ turn out to ensure the small tooth is present. Visually inspect the yellow safety lanyard to ensure that it is serviceable and it has not been wired, tied, or taped down. Drop both hands and move back to the front of the jumper and issue the command "**SQUAT**".

Now insert the index and middle fingers of both hands behind the leg straps just under the aviator's kit bag where the natural pocket is formed and trace both hands all the way back to the saddle. Begin tracing the right leg strap forward, insuring that it is not misrouted around the saddle, that it is free from any twists, cuts or frays. Ensure that the excess webbing is secured in the webbing retainer. Continue tracing until you reach the quick-fit V ring. Rotate your left thumb up and seat the activating lever and conduct a visual inspection to ensure that it is free of any foreign material. Keep your left thumb in place. Now focus your attention to your right hand, which still should be all the way back to the saddle. Begin tracing the left leg strap forward insuring that it is not misrouted around the saddle, that it is free from any twists, cuts or frays. Ensure that the excess webbing is secured in the webbing retainer, and that it is routed over the lower portion and under the upper portion of the exposed carrying handle of the aviator's kit bag. Continue tracing up until you make finger tip to metal contact with the quick-fit V ring. If you have a hard time making fingertip to metal, rotate your fingers skyward and push up until you do make fingertip to metal contact. Once you have fingertip to metal contact, remove your right hand, and utilize your right forearm, lift up and out on the M1950 weapons case. Now place your right index finger or thumb on the activating lever of the left leg straps and seat it. Conduct a visual inspection to ensure that it is free of any foreign material that will keep it from seating properly. Now rotate back in front of your jumper and conduct a visual inspection of the aviator's kit bag. Secure the bottom of the ALICE pack and issue the command of "**RECOVER**". (Jumpers pick up on the reserve parachute and jumpmasters simply allow the ALICE pack to rotate between your body and the jumper's body.)

Inspection continues the same as a Hollywood jumper.

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# T-11 ATPS
# Jumpmaster Personnel Inspection

**3 August 2011**

**NOTE: PREPARE THE JUMPER FOR INSPECTION**

Prior to inspecting the Jumper, the Jumpmaster will prepare the Jumper for inspection. The Jumpmaster will move behind the Jumper and open the Main Curved Pin Protector Flap. Next, disconnect the Universal Static Line Snap Hook from the right Outer Static Line Stow Bar; ensure the Spring Opening Gate has spring tension. The Jumpmaster will remove all excess Universal Static Line Modified from the Static Line Slack Retainer Band on the Static Line Slack Retainer Loop, remove all twist and route the Universal Static Line Modified over the shoulder corresponding with the door the Jumper is to exit. The Jumpmaster will secure the Universal Static Line Snap Hook to the Carrying Handle of the T-11 Reserve Parachute, with the Spring Opening Gate facing the Jumper. Finally, the Jumpmaster will remove the top and bottom Tuck Tabs, taking care to ensure that both side Tuck Tabs remain secure. If the Side Tuck Tabs become unsecure the Jumpmaster will notify a Rigger. The Jumpmaster may now begin his inspection. After the Jumpmaster has completed his Jumpmaster Personnel Inspection, the Jumpmaster will place the Jumper into jump configuration.

**a. ADVANCED COMBAT HELMET (FRONT):**

The Jumpmaster will place both hands, fingers and thumbs extended and joined, pointing skyward, palms facing the Jumper on the right side of the Advance Combat Helmet. The left hand is the control hand; the right hand is the working hand. With the working hand trace across the rim of the Advance Combat Helmet feeling for any sharp or protruding edges that may cut or damage the Jumper's Universal Static Line Modified upon exiting the aircraft. Once the hands are parallel place the thumbs on the rim of the Advance Combat Helmet and tilt the Jumpers head to the rear. Conduct a visual inspection to ensure the three suspension pads are present and the two oval pads are covering the bolt ends.

Place the right index finger on the left adjustable buckle, to ensure it is free of all cracked components, is serviceable, the left Adjustable Strap is properly routed through it and the free running end is secured in the Webbing Retainer. Trace the left Adjustable Strap down. Ensure it is not twisted, cut or frayed to the chinstrap fastener, ensure it is free of all cracked components and properly secured. Trace the long portion chinstrap, under the Jumper's chin to ensure it is not twisted, cut or frayed, to where it is sewn into the right Adjustable Strap. Trace the right Adjustable Strap up, ensure it is not twisted, cut or frayed, to the right adjustable buckle. Ensure it is free of all cracked components, it is serviceable, the right Adjustable Strap is properly routed through it, and the free running end is secured in the Webbing Retainer. With the right index finger, trace the short portion chinstrap across the front of the Jumper's chin, ensure it is not twisted, cut or frayed and drop both hands.

**b. CANOPY RELEASE ASSEMBLY:**

The next items of equipment we will discuss are the Canopy Release Assemblies. We will start with the Canopy Release Assembly opposite the Universal Static Line Modified. Since the Universal Static Line Modified is routed over the jumper's right shoulder, we will begin the inspection with the jumper's left Canopy Release Assembly. Look at the left Canopy Release Assembly; tap it with the knuckles of the right hand one time to ensure that it sounds solid. **(Jumpers, this is your key to place both hands on your Advanced Combat Helmet).** With your right hand form a knife cutting edge, fingers extended and joined, palm facing towards you, and insert it behind the Main Lift Web just below the Canopy Release Assembly. Place your right thumb on the outside corner of the Canopy Release Assembly, and rotate it ¼ turn to the outside. With your head and eyes approximately six to eight inches away conduct a visual inspection to ensure the Male Fitting Canopy Release Assembly is properly secured by the Female Fitting Canopy Release Assembly, and properly secured by the Latch. Ensure the Cable Loop is properly secured by the Safety Clip and the Canopy Release Assembly is free of all dirt or foreign material that will keep it from seating completely. Now let the Canopy Release Assembly return back to its normal position. Keep your right hand in place. As you can see jumpmasters, the Universal Static Line Modified is routed over the jumper's right shoulder. With your left hand secure the Universal Static Line Modified and rotate it over to your right thumb and secure it in place. Look at the right Canopy Release Assembly; tap it with the knuckles of the left hand one

time to ensure that it sounds solid. With your left hand form a knife cutting edge, fingers extended and joined palm facing towards you the jumpmaster and insert it behind the Main Lift Web just below the Canopy Release Assemblies. Place your left thumb on the outside corner of the Canopy Release Assembly and rotate it ¼ turn to the outside, and conduct the same inspection. Now let the Canopy Release Assembly return back to its normal position.

**c. MAIN LIFT WEB:**

Leave the right hand in place. Look at the left hand and the right Main Lift Web. First make note of which of the three sizes the Main Lift Web is configured. Keep this in mind and ensure the Main Lift Web Tuck Tab Assembly is properly assembled and the Snap Fastener is secure. With the left hand trace down the Main Lift Web, ensure it is not twisted, cut, or frayed, until you make contact with the Main Lift Web Adjuster. Leave the left hand in place. Look at the right hand and conduct the same inspection. Ensure the left Main Lift Web Tuck Tab Assembly is in the same location as the right Main Lift Web Tuck Tab Assembly. Leave the right hand in place.

**d. CHEST STRAP:**

Look at the Chest Strap to ensure that it is not misrouted around the left Main Lift Web. With the left hand palm facing the Reserve Parachute, grasp the Carrying Handle and lift up and out. Insert the right hand, fingers and thumb extended and joined, fingers pointing down, palm facing the Jumpmaster from top to bottom behind the Chest Strap, next to where it is sewn into the left Main Lift Web. Trace the Chest Strap, ensure that it is not twisted, cut or frayed, until you make contact with the Chest Strap Friction Adapter. Visually inspect to ensure it has a two to three finger quick release that is secured in its Webbing Retainer, the free running end has been "S" folded or accordion folded, not rolled, and secured in its Webbing Retainer with the tab portion towards the Chest Strap Friction Adapter. Continue to trace the Chest Strap, ensure it is not twisted, cut or frayed, next to where it is sewn into the right Main Lift Web. Leave the right hand in place.

**e. WAIST BAND:**

Remove the left hand, move to the right side. Insert the left hand, fingers and thumb extended and joined, fingers pointing skyward, palm facing the jumpmaster, from bottom to the top behind the Waistband next to where it is sewn to the Pack Tray. Look at the Waistband where it is sewn to the Pack Tray to ensure it is secured to the Pack Tray by a Box "X" stitch, with at least 50 percent of the stitching present. Trace the Waistband forward, ensure it is not twisted, cut, frayed; been misrouted behind the Horizontal Blackstrap or right Main Lift Web. Continue tracing the Waistband forward until the right Waistband Retainer rests in the palm. Leave the left hand in place. Remove the right hand from behind the Chest Strap and insert it fingers and thumb extended and joined, fingers pointing skyward, palm facing the Jumpmaster, from bottom to top behind the Reserve Parachute so the left Waistband Retainer rests in the palm of the right hand. Make finger tip to finger tip contact, and conduct a physical inspection to ensure the Waistband is not twisted and has been routed through both Waistband retainers. Leave the left hand in place. And with the right hand continue to trace the Waistband back. Ensure it is not twisted, cut, frayed and has not been misrouted behind the left Main Lift Web, until the Metal Adjuster rests in the palm of the right hand. Remove the left hand from behind the Reserve Parachute and insert the index and middle fingers from top to bottom into the quick release formed by the Waistband. Ensure it is no more than three fingers, no less than two, and it is not a false quick release. Remove the index and middle fingers from the quick release and with the index finger and thumb pinch off the free running end of the Waistband where it emerges from the Metal Adjuster. Trace the free running end of the Waistband to ensure it is not cut, torn, or frayed and is easily accessible to the Jumper until the fingers fall off the end. With the left hand palm facing the Reserve Parachute grasps the Carrying Handle, and Look at the right hand and the Waistband Adjuster Panel. With the right hand trace the Waistband Adjuster Panel back, ensure it is not twisted, cut, or frayed, and has not been misrouted behind the Horizontal Blackstrap to where it is sewn to the Pack Tray. Ensure it is properly secured to the Pack Tray by a Box "X" stitch, with at least 50 percent of the stitching present.

**f. T-11 RESERVE:**

Remove the right hand and move in front of the Jumper. Look at the left Connector Snap. With the index finger of the right hand, finger the Opening Gate one time to ensure it is properly secured to the left D-ring, has spring tension, has not been safetied, and the Opening Gate is facing the Jumper with the butterfly portion to the outside. With the left hand, lift up and out on the Carrying

Handle. Conduct a visual inspection of the Connector Snap Retaining Tie to ensure it is serviceable then visually inspect the left Spreader Bar Tie to ensure it is properly routed through both grommets, and is secured with a Surgeon's Knot Locking Knot with Overhand Knots. With the right index finger conduct a physical and visual inspection to ensure an Army Parachute Log Record is present. Remove the left hand. With the right hand palm facing the Reserve Parachute, grasp the Carrying Handle and lift up and out. Conduct the same inspection of the right Connector Snap Retaining Tie, right Spreader Bar Tie and the right Connector Snap. Remove the right hand. With the left hand, form a knife cutting edge, palm facing the Jumpmaster, and sweep the Carrying Handle and Universal Static Line Snap Hook towards the Jumper. Place the left thumb on the top right corner of the Rip Cord Assembly and apply inward pressure. Conduct a visual inspection of the top Tuck Tab to ensure a Directional Arrow is present and pointing skyward. With the thumb and index finger of the right hand, pinch off the Top Tuck Tab. Gently pull it down. Take care to ensure the side Tuck Tabs remain secure. Expose the Curved Pin and Reserve Closing Loop. Place the left thumb on top of the Top Tuck Tab and apply inward pressure. Place the right index finger on the upper portion of the Curved Pin and trace it down ensuring it is not bent, cracked or corroded and is properly routed through the Reserve Closing Loop, to its point of attachment the Curved Pin Lanyard. Leave the right index finger in place. Conduct a visual inspection of the Reserve Closing Loop to ensure it is not cut, frayed or burned and the Curved Pin is not puncturing it in any manner. Conduct a visual inspection of the Grommet to ensure it is not bent, cracked or corroded. Insert the index finger of the right hand from top to bottom behind the Rip Cord Assembly and trace down the Curved Pin Lanyard to ensure is not twisted, cut, or frayed and it is properly attached to the Rip Cord Assembly by Reinforced Stitching. Withdraw the right index finger. With the thumb and index finger of the right hand, pinch off the bottom Tuck Tab and gently lift it up. Take care to ensure the side Tuck Tabs remains secure. Expose the Curved Pin and Reserve Closing Loop. Place the left thumb on top of the bottom Tuck Tab, apply inward pressure. Place the right index finger on the lower portion of the Curved Pin and trace it up ensure it is not bent, cracked or corroded and is properly routed through the Reserve Closing Loop, to its point of attachment the Curved Pin Lanyard. Leave the right index finger in place. Conduct a visual inspection of the Reserve Closing Loop to ensure it is not cut, frayed or burned and the Curved Pin is not puncturing it in any manner. Conduct a visual inspection of the Grommet to ensure it is not bent, cracked or corroded. Insert the index finger of the right hand from bottom to top behind the Rip Cord Assembly and trace up the Curved Pin Lanyard to ensure it is not twisted, cut or frayed, and it is properly attached to the Rip Cord Assembly by Reinforced Stitching. Withdraw the right index finger. An overall inspection of the Reserve Parachute must be conducted to ensure it is free of grease, oil, dirt, mud, tears and exposed canopy. Place both hands fingers and thumbs extended and joined palms facing the Reserve Parachute on the top right corner. The left hand is the control hand and the right hand is the working hand. With the head and eyes 6 to 8 inches from the working hand trace across the top Pack Closing Flap, down the left Pack Closing Flap, across the bottom Pack Closing Flap, turn the working hand over and trace up the right Pack Closing Flap until skin-to-skin contact is made with the control hand. Raise the control hand up out of the way and trace where the control hand had been. Raise the Reserve Parachute to the Jumper and issue the command of **"HOLD SQUAT".**

**g. LEG STRAPS:**

Insert the index and middle finger of each hand from outside to inside, behind the Leg Straps, below the Aviator's Kit Bag where the natural pocket is formed. Simultaneously slide both hands back towards the Saddle, to ensure the Leg Straps are not crossed. Leave the right hand in place. With the left hand trace the right Leg Strap up, ensure it is not twisted, cut, or frayed, until contact is made with the Quick Fit "V" Ring. With the thumb press in on the Activating Lever of the Ejector Snap to ensure it is properly seated over the Ball Detent and is free of foreign matter. Leave the left hand in place and look at the left Leg Strap. With the right hand trace the left Leg Strap up ensure it is not twisted, cut, or frayed and it is properly routed through the exposed Carrying Handle of the Aviator's Kit Bag, over the bottom and under the top, until contact is made with the Quick Fit "V" Ring. With the thumb or index finger of the right hand press in on the Activating Lever of the Ejector Snap to ensure it is properly seated over the Ball Detent, and is free of foreign matter. Conduct a visual inspection to ensure the Aviator's Kit Bag is present, has not been reversed and the re-enforced sewn portion is facing away from the Jumper. Once satisfied with the inspection, stand up in front of your jumper. **(Hollywood jumpers will automatically recover.)**

**h. UNIVERSAL STATIC LINE MODIFIED:**

With the right hand grasp the Universal Static Line Snap Hook. Pull up on the Universal Static Line Snap Hook to ensure it is secured to the Carrying Handle. Open the right hand and let the Universal Static Line Snap Hook rest in the palm. Place the index finger of the left hand on the Girth Hitch of the Universal Static Line Modified. Ensure the Girth Hitch has not been reversed. Place

the index finger of the left hand in the vicinity of the Rivet Pin, to ensure it is present, free of rust and corrosion. With the right hand, re-grasp the Universal Static Line Snap Hook and hold it perpendicular to the Reserve Parachute with the Spring Opening Gate facing towards the Jumper. With the left hand, palm facing the Jumper, thumb pointing downward, grasp the Universal Static Line Modified just above the Universal Static Line Snap Hook. Rotate the Universal Static Line Modified down and to the Jumper's right and push it toward the Universal Static Line Snap Hook. Visually inspect inside the Girth Hitch to ensure it is free of all cuts, frays and burns. With the index finger or thumb of the right hand push the Girth Hitch back towards the Universal Static Line Snap Hook and again visually inspect inside the Girth Hitch for any cuts, frays or burns. Redress the Girth Hitch down around the narrow portion of the Universal Static Line Snap Hook and release the Universal Static Line Modified with the left hand. Since the Universal Static Line Modified is routed over the right shoulder; with the index finger and thumb of the right hand, form an "O" around the Universal Static Line Modified just above the Universal Static Line Snap Hook. Raise the right hand up simultaneously inspecting the Universal Static Line Modified as it passes through the "O" to ensure it is free of all cuts, frays, or burns. Raise the right hand as high as it can go, or until you feel resistance and issue the Jumper the command **"TURN".** Once the Jumper has completed the turn, the right hand should have been raised high enough so as to keep the Universal Static Line Modified tight between the hand and the first stow. Place the index finger, or index and middle finger of the left hand behind the Universal Static Line Modified below the right hand making skin-to-skin contact. Trace the Universal Static Line Modified down ensure it is free of all cuts, frays, burns and it has not been misrouted under or through either Riser Assembly, to the first stow. With either hand, form a bite in the Universal Static Line Modified and look at the Static Line Slack Retainer Loop. Ensure it is present, serviceable and a Static Line Slack Retainer Band is attached. Place the bite on top of the Pack Tray and control it with either hand. This hand becomes the control hand. The opposite hand becomes the working hand. With the index finger and thumb of the working hand pinch off the first stow and pull it one to two inches toward the center of the Pack Tray. Look behind the first stow, and ensure the Universal Static Line Modified is free of cuts, frays, or burns and has not been misrouted around the static line stow bar. Release the first stow and let it pop back into place. Insert the index finger of the working hand from bottom to top behind the first strand of Universal Static Line Modified as close as possible to the first stow. Trace the first strand of Universal Static Line Modified, ensure that it is free of all cuts, frays, or burns to the second stow. With the index finger and thumb of the working hand pinch it off and pull one to two inches towards the center of the Pack Tray and conduct the same inspection. Place the index finger or thumb of the working hand from bottom to top behind the second strand of Universal Static Line Modified and trace it to ensure it is not cut, frayed, or burned. (**NOTE:** Remember when tracing the Universal Static Line Modified towards you, only the index finger will be used.) Continue to inspect the Universal Static Line Modified in the same manner to the Main Curved Pin Cover. Ensure the last strand of Universal Static Line Modified is routed from the right Outer Static Line Stow Bar and inspected with the index finger only. With the index finger of the working hand gently lift up on the Main Curved Pin Cover. Inspect the Main Curved Pin Attaching Loop to ensure that it is properly attached to both the Universal Static Line Modified and the Main Curved Pin. With the index finger of the working hand trace the Main Curved Pin from its point of attachment to ensure it is not bent, cracked or corroded and is properly routed from left to right through the Main Closing Loop, to the end of the Main Curved Pin. Leave the index finger in place. Visually inspect the Main Closing Loop to ensure it is not, cut, frayed, or burned and the Main Curved Pin is not puncturing it in any manner. Conduct a visual inspection of the Grommet to ensure it is not bent, cracked, or corroded. With the index finger and thumb of the working hand gently lift up on the Main Curved Pin Protector Flap, and conduct a visual inspection of the Main Closing Loop, ensure it is not cut, frayed, or burned and the Grommet is not bent, cracked, or corroded. Stand behind the Jumper**.**

**i. ADVANCED COMBAT HELMET (REAR):**

The Jumpmaster will place both hands fingers and thumbs extended and joined pointing skyward, palms facing the Jumper on the left side of the Advance Combat Helmet. The left hand is the control hand and the right hand is the working hand. With the working hand trace across the rim of the Advance Combat Helmet feeling for any sharp or protruding edges that may cut or damage the Jumper's Universal Static Line Modified upon exiting the aircraft. Once the hands are parallel place the thumbs on the rim of the Advance Combat Helmet and tilt the Jumper's head forward. Conduct a visual inspection to ensure the oval pads are covering the bolt ends and the rear Trapezoidal pad is protruding slightly past the rim of the Advance Combat Helmet.

Place the right index finger on the right adjustable buckle. Ensure it is free of all cracked components and is serviceable and the right Adjustable Strap is properly routed through it and the free running end is secured in the Webbing Retainer. Trace the right Adjustable Strap down, ensure it is not twisted, cut or frayed until contact is made with the long portion Chin Strap. Leave the right index finger in place. Place the left index finger on the left adjustable buckle and conduct the same inspection. Leave the left index

finger in place.

Conduct a visual inspection of the Nape Pad to ensure it is present, secure, serviceable, and has not been reversed.

**j. RISER ASSEMBLIES:**

Reach over the Jumper's shoulders and grasp a Riser Assembly in each hand just above the Canopy Release Assemblies. Since these are like items of equipment either Riser Assembly can be inspected first. However for this talk through we will begin the inspection with the left Riser Assembly. Give the left Riser Assembly a sharp **TUG** to the rear. **OPEN** the left hand to form an "L". Apply upward pressure with the left thumb and **TRACE** the Riser Assembly rearward to where it disappears into the main Pack Tray, ensuring it is not twisted, cut, or frayed. Leave the left hand in place. With the right hand conduct the same inspection on the right Riser Assembly. You must ensure an Army Parachute Log Record is present in either Riser Assembly.

**k. PACKTRAY:**

An overall inspection of the Pack Tray must be conducted to ensure the Pack Tray is free of grease, oil, dirt, mud or tears. Place both hands fingers and thumbs extended and joined palms facing the Pack Tray on the top left corner of the Pack Tray. The left hand is the control hand and the right hand is the working hand. With the head and eyes 6 to 8 inches away from the working hand trace across the top Pack Closing Flap, down the right Pack Closing Flap, across the bottom Pack Closing Flap. Turn the working hand over and trace up the left Pack Closing Flap until skin to skin contact is made with the control hand. Raise the control hand up out of the way and trace where the control hand had been. Form knife-edges with both hands, palms facing the Jumpmaster and issue the command **"ARCH YOUR BACK"**.

**l. DIAGONAL/HORIZONTAL BACKSTRAPS:**

Insert both hands under the "X" formed by the Diagonal Back straps. Look at the Diagonal Back straps to ensure they are properly routed over the appropriate shoulder, and the top Diagonal Blackstrap has one more row of exposed stitching than the bottom. Look at the Diagonal Blackstrap Retainers to ensure they are routed through the Sizing Channels on the Diagonal Back straps. The Diagonal Blackstrap Retainers are routed around the Diagonal Blackstrap Keeper and the Directional Snap Fasteners are secure. To further ensure the Directional Snap Fasteners are secure, with both thumbs, **PLUCK** the tab portion on the Diagonal Blackstrap Retainers upward. With the left hand, trace down the Diagonal Blackstrap to ensure it is not twisted, cut or frayed to the Blackstrap Adjuster. Grasp the Blackstrap Adjuster with the left hand and Look at your right hand and the right side of the Jumper. With the right hand trace down the Diagonal Blackstrap, ensure it is not twisted, cut or frayed. Bypass the Blackstrap Adjuster and pick up the inspection of the Horizontal Blackstrap. Trace down, ensure it is not twisted, cut, or frayed, until it disappears into the right Main Lift Web. Withdraw the right hand from under the Horizontal Blackstrap, and reinsert it, fingers and thumb extended and joined, fingers pointing skyward, palm facing the Jumpmaster, from bottom to top behind the Horizontal Blackstrap where it reemerges from the right Main Lift Web. Issue the Jumper the command of, **"BEND."** Place your left shoulder on the bottom Pack Closing Flap and push up on the bottom of the Pack Tray. Simultaneously, with your left hand pull down on the Blackstrap Adjuster. With your head and eyes approximately six to eight inches away trace the Horizontal Blackstrap across the small of the jumper's back, until your right pinkie finger makes contact with the Main Lift Web on the jumpers left side.

You're inspecting the Horizontal Blackstrap to ensure that Horizontal Blackstrap is not twisted, cut or frayed, that the Horizontal Blackstrap retainers are routed under and over the Horizontal Blackstrap keeper and secured to themselves with Directional Snap Fasteners and that nothing is misrouted behind the Horizontal Blackstrap. Withdraw the right hand from behind the Horizontal Blackstrap, and reinsert it, from top to bottom or bottom to top, behind the Horizontal Blackstrap where it reemerges from behind the left Main Lift Web. Trace up until you make skin-to-skin contact with the left hand. Remove the right hand.

**m. SADDLE:**

Place the fingertips of the right hand, fingers and thumb extended and joined, palm facing the Jumper, on the lower portion of the Jumper's left Main Lift Web Adjuster. Trace down the lower portion of the Main Lift Web transitioning to the Jumper's Saddle ensure it is not twisted, cut, frayed or been inverted, and neither Leg Strap has been misrouted around the Saddle. Continue to trace until you make contact with the lower portion of the right Main Lift Web Adjuster. Reach back and get a hand full of air and issue the

Jumper that good seal of approval by tapping the Jumper on the buttocks and issuing the command **"RECOVER".**

**NOTE: PLACE THE JUMPER INTO JUMP CONFIGURATION**

After the Jumpmaster has completed his Jumpmaster Personnel Inspection, the Jumpmaster will place the jumper into jump configuration. The Jumpmaster will trace the Universal Static Line Modified from the Universal Static Line Snap Hook to ensure that the Universal Static Line Modified is routed over the shoulder corresponding with the door the jumper is to exit. Once behind the jumper the Jumpmaster will remove all slack from the Universal Static Line Modified and stow it in the Static Line Slack Retainer Band. The Jumpmaster will manipulate the Main Curved Pin from left to right ensuring that the Main Curved Pin's end is in the 3 O'clock position. Lastly the Jumpmaster will reinsert the Main Curved Pin Protector Flap into the Tuck Flap.

# T11 ATPS JMPI TALK THROUGH
# COMBAT EQUIPMENT

**TRANSITION:** Now that you are familiar with the inspection sequence for a Hollywood jumper, let's discuss the sequence for a combat equipped jumper.

The inspection sequence for a combat equipped jumper is the same as for a Hollywood equipped jumper down to the Waistband.

**a. INSPECTION OF COMBAT EQUIPMENT:**

Insert the right hand behind the Chest Strap as close as possible to where it is sewn into the right Main Lift Web. Move to the right side of the jumper. Insert the left hand, fingers and thumb extended and joined, fingers pointing skyward, palm facing you the Jumpmaster, from bottom to the top behind the Waistband next to where it is sewn to the Pack Tray. Look at the Waistband where it is sewn to the Pack Tray to ensure it is secured to the Pack Tray by a Box "X" stitch, with at least 50 percent of the stitching present. Trace the Waistband forward, ensure it is not twisted, cut, frayed, or been misrouted behind the Horizontal Blackstrap or right Main Lift Web. Continue tracing the Waistband forward until the right Waistband Retainer rests in the palm. Leave the left hand in place. Remove the right hand from behind the Chest Strap and insert it fingers and thumb extended and joined, fingers pointing skyward, palm facing the Jumpmaster, from bottom to top behind the Reserve Parachute outside of the left Adjustable "D" Ring Attaching Strap so the left Waistband Retainer rests in the palm of the right hand. Make finger tip to finger tip contact, and conduct a physical inspection to ensure the Waistband is not twisted and has been routed through both Waistband Retainers. Leave the right hand in place, and rotate the left hand over the right forearm and grasp the left Pack Closing Flap of the Reserve Parachute, palm facing the Reserve Parachute. Remove the right hand from behind the Waistband Retainer and with the right forearm push out on the lead edge of the M-1950 weapons case for the first time. Look at the Waistband to ensure it is not twisted, cut, or frayed, and has not been misrouted behind the left Main Lift Web. With the right hand, grasp the trail edge of the M-1950 weapons case and pull it forward. With the right hand, fingers and thumb extended and joined, fingers pointing skyward, palm facing the Jumpmaster, insert it from bottom to top behind the Metal Adjuster. Remove the left hand from the left Pack Closing Flap of the Reserve Parachute and insert the index finger and middle finger of the left hand from top to bottom into the quick release formed by the Waistband. Ensure that it is no more than three fingers, no less than two and it is not a false quick release. Remove the index finger and middle finger from the quick release and with the index finger and thumb of the left hand pinch off the free running end of the Waistband where it emerges from the Metal Adjuster. Trace the free running end of the Waistband, ensure it is not cut, torn, or frayed and is easily accessible to the Jumper until the fingers fall off the end. Place the left hand on the left Pack Closing Flap of the Reserve Parachute, palm facing the Reserve Parachute and look at the right hand and the Waistband Adjuster Panel. With the right hand trace the Waistband Adjuster Panel back. Ensure that it is not twisted, cut, or frayed, and has not been misrouted behind the Horizontal Blackstrap to where it is sewn to the Pack Tray. Ensure it is properly secured to the Pack Tray by a Box "X" stitch, with at least 50 percent of the stitching present. Remove the right hand and move in front of the jumper. With the right forearm, push out on the lead edge of the M-1950

weapons case for the second time.

**b. <u>M-1950 WEAPONS CASE</u>:**

The M1950 weapons case will be inspected in its entirety prior to inspecting the Reserve Parachute. The inspection of the M-1950 weapons case begins with its point of attachment the Quick Release Snap. Look at the Quick Release Snap to ensure it is the outermost item of equipment on the left Equipment Ring, and the Opening Gate is facing the Jumper. With the right index finger, finger the Opening Gate one time to ensure that it is properly attached to the left Equipment Ring, it has spring tension and it has not been safetied. With the heel of the right hand press up on the Activating Arm of the Quick Release Snap to ensure that it is seated between the Ball Detents. With the index finger of the right hand, trace down until contact is made with the V-ring. Ensure the Quick Release Link is routed through the "V"-ring, and the Quick Release Link is secured by the Rotating Claw. Continue to trace down the inside of the M-1950 weapons case until contact is made with the Adjusting Strap. Ensure the Adjusting Strap is routed through the appropriate set of Adjusting Strap Connectors, secured by means of a half hitch and is not twisted, cut or frayed. Continue tracing down the inside of the M-1950 weapons case until the finger falls off the bottom. Form a knife-edge with the right hand, palm facing skyward and trace from front to rear along the bottom of the M-1950 weapons case to ensure the muzzle of the weapon is not protruding. Place the index finger of the right hand on the Slide Fastener at the bottom of the Closing Flap. Trace up the Slide Fastener to ensure it is secure, bypass the Lower Tie Down Strap and continue to trace up the Slide Fastener in the vicinity of the Lift Fastener. With the index finger of the right hand, form a hook and pull down and out on the Slide Fastener Tab Thong. Pull down and out to ensure the Slide Fastener Tab Thong is secured by either the Upper Tie Down Tape or been separated over the Lift Fastener, never both. . **(However, while here it will be secured by the Upper tie down tape)** Drop the right hand down 10 to 12 inches from the top of the M-1950 weapons case and give it a sharp slap, feeling for the forward assist of the M-4/M-16 series rifle or the charging handle of the M249 SAW. With the index finger and thumb of the right hand, pinch off the bowknot of the Upper Tie Down Tape on the front of the M-1950 weapons case. Visually inspect the Upper Tie Down Tape to ensure it is properly routed behind the M-1950 weapons case, through the D-ring from bottom to top, to the outside of the connector snap, and secured by a single or double loop bowknot. This concludes the inspection of the M1950 weapons case. Inspect the Reserve Parachute in the same manner as if it were on a Hollywood jumper.

**c. <u>ALICE PACK</u>:**

The inspection of the Harness Single Point Release begins with the Adjustable "D" Ring Attaching Straps. These are like items of equipment so either one can be inspected first, however for the purpose of this talk through we will begin with the right Adjustable "D" Ring Attaching Strap. Simultaneously, with both hands form fists with your index fingers exposed. Place your index fingers on the snap hooks of the Adjustable "D" Ring Attaching Straps. Now focus your attention to your left hand. Conduct a visual inspection to ensure that the Snap Hook has not been, cracked, corroded or distorted out of shape and that the Opening Gate is facing towards the jumper. With the index finger of the left hand, finger the Opening Gate one time to ensure that it is properly secured to the right Equipment Ring, and it has spring tension. With the left thumb flip the free running end of the right Adjustable "D" Ring Attaching Strap out of the way. Place the index finger of the left hand on the front of the right Adjustable "D" Ring Attaching Strap just below the Snap Hook. Trace down the right Adjustable "D" Ring Attaching Strap until contact is made with the Triangle Link, ensuring that the right Adjustable "D" Ring Attaching Strap is not twisted cut, or frayed. Bypass the Triangle Link and pick up the inspection of the White Attaching Loop in front of the Triangle Link. With the left index finger, trace down the attaching loops to ensure that the White Attaching Loop is routed from bottom to top through the Triangle Link, the Green Attaching Loop has been routed from bottom to top through the White Attaching Loop, the Red Attaching Loop is routed from bottom to top through the Green Attaching Loop, and routed from bottom to top through the grommet on the Female Portion Leg Strap Release Assembly. Place the index finger of the left hand on the Box "X" stitch on the Release Handle Cross Strap. Look at the Release Handle Cable where it emerges from the Release Handle Cross Strap. Ensure the Release Handle Cable is properly routed through the Red Attaching Loop and secured by the Cable Loop Retainer. Leave the left index finger in place and with your right hand conduct the same inspection of the left Adjustable "D" Ring Attaching Strap. After inspecting the left Adjustable "D" Ring Attaching Strap, focus your attention on the Release Handle. With the right index finger and thumb, index finger on top and thumb on the bottom, lift up gently on the Release Handle. Ensure the Release Handle is properly routed between the two plies of the Release Handle Cross Strap and secured by the Hook Pile Tabs. Now form a hook with your right index finger and lift up on the Release Handle Lanyard, to ensure it is not twisted or misrouted around the Equipment Retainer Strap. Place your right index finger back on the Box "X" stitch. Trace the Equipment

Retainer Straps down between the external cargo compartments of the ALICE pack until you make contact with the Adjustable Cross Strap. Leave your left index finger in place and with the index finger and thumb of the right hand grasp the free running end of the Adjustable Cross Strap and give it a tug to the jumper's left, ensuring that all the slack has been removed from the Adjustable Cross Strap. Now place your right index finger back on the Box "X" stitch and continue to trace the Equipment Retainer Straps down until your fingers fall off. Now secure the sides of the ALICE pack and raise it to eye level and look at the Equipment Retainer Straps to ensure they are routed behind the Envelope Cushion and have not been twisted. Raise the ALICE pack to the jumper and issue the command **"HOLD".**

**(Jumpers you will secure the ALICE pack by the Adjustable Cross Strap and the Adjustable Cross Strap only, and hold it up high.)** You will continue your inspection of the Equipment Retainer Straps as they route under the Envelope Cushion portion of the ALICE pack. Ensure the Equipment Retainer Straps form an X configuration on the rear of the ALICE pack. Continue your inspection until your fingers rest behind the 2-3 finger quick releases in the Equipment Retainer Straps. As you bypass the girth hitch, make a mental note to ensure it is routed north to south, south to north, never east to west. Simultaneously, you will inspect the 2-3 finger quick releases by placing the index and middle fingers of each hand, palms facing you, on the outside of the quick releases. Now visually inspect the free running ends of the Equipment Retainer Straps to ensure they are S-folded and secured with either masking tape or retainer bands, one or the other, never both, and not secured to the quick releases. With the index finger of each hand, lightly tap them to ensure the S-folds are secure**.** Now with the thumb and index fingers of each hand, form an "O" around the lower portion of the Adjustable Shoulder Carrying Straps. Simultaneously pull out to ensure they are properly secured to the ALICE pack frame. Visually inspect the free running ends of the Adjustable Shoulder Carrying Straps to ensure they are S-folded and secured with masking tape or retainer bands, one or the other never both. With the index fingers of each hand, lightly tap the free running ends of the Adjustable Shoulder Carrying Straps to ensure the S-folds are secure

**d. <u>HOOK, PILE, TAPE LOWERING LINE</u>:**

With the index finger of your right hand place it on the Hook Pile Tape Lowering line just to the right of the girth hitch. You will visually inspect to ensure the girth hitch is vertical. With your right index finger trace the Hook Pile Tape Lowering line until you make contact with the first set of Hook Pile Tabs. As you do this conduct a visual inspection to ensure that the Hook Pile Tape Lowering line is properly routed over the left adjustable shoulder-carrying strap. Ensure it is present and that it is secured. Visually inspect to ensure there are no S-folds protruding from the end of the Retainer Flap. Continue to inspect down the retainer flap ensuring that it is secured to the ALICE pack frame with retainer bands, one above and one below the Horizontal frame support. Continue to trace down until you make contact with the second set of Hook Pile Tabs, once again ensure they are present and secured and there are no S-folds protruding from the end of the Retainer Flap. Continue to trace the Hook Pile Tape Lowering line until your hand disappears behind the M1950 Weapons case. Visually inspect to ensure the Hook Pile Tape Lowering line is properly routed between the main body of the M1950 Weapons Case and the 1 ply of reinforced nylon webbing. Rotate your left hand over your right forearm and secure the trail edge of the M1950 Weapons case. Remove your right index finger and place it on the Hook Pile Tape Lowering line where it reemerges from the M1950 Weapons Case. Continue to trace up until you make contact with the Ejector Snap. With the right thumb press in on the activating lever to ensure that it is properly seated over the ball detent and free of all foreign matter and the Opening Gate is facing the jumper. Turn the Ejector Snap ¼ turn out to ensure the small tooth is present. Visually inspect the yellow safety lanyard to ensure that it is serviceable and it has not been wired, tied, or taped down. Drop both hands and move back to the front of the jumper and issue the command "**SQUAT**". Now inspect the Leg Straps and the Aviator's Kit bag in the same manner as a Hollywood Jumper. Secure the bottom of the ALICE pack and issue the command of "**RECOVER**". **(Jumpers pick up on the reserve parachute and Jumpmasters simply allow the ALICE pack to rotate between your body and the jumper's body.)**

# Pre-Jump Training

## FM 3-21.220 Chapters 3 & 8

**16 November 2009**

Prior to Pre-jump Training, place the jumpers into a formation that allows the jumpmaster to easily control them and make on the spot corrections. The extended rectangular formation and the horseshoe formation are the two preferred formations.

Prior to placing the jumpers into formation, ensure the jumpmaster team inspects the ballistic helmets, ID tags and ID cards. The jumpmasters or the safeties can accomplish this inspection.

Although Pre-jump can be given by anyone on the jumpmaster team, the primary jumpmaster can delegate authority but not responsibility.

Holding, running, one riser slips, and other information can be inserted into Pre-jump as the Airborne Commander sees fit.

Although Pre-jump training should be tailored to fit the mission, emergency landings will always be covered due to the many variables involved with emergency situations; i.e. if jumpers have to conduct an emergency bailout over unfamiliar terrain.

Pre-jump training is performance-oriented training and the jumpmaster team must ensure that the jumpers are performing the actions as they are being covered. During Pre-jump training, use the "HIT IT" exercise as often as needed to keep the jumpers actively involved. Jumpmasters will refer to their unit **ASOPs** for additional guidance.

When jumping rotary wing aircraft, jumpers will extend their count to six thousand.

The first items I will cover are the points of performance. Your first point of performance is **PROPER EXIT, CHECK BODY POSITION AND COUNT**. "**JUMPERS HIT IT**." Upon exiting the aircraft, snap into a good tight body position. Keep your eyes open, chin on your chest, elbows tight into your sides, place your hands on the end of the reserve, with your fingers spread. Bend forward at the waist keeping your feet and knees together, knees locked to the rear and count to four thousand.

At the end of your four thousand count immediately go into your second point of performance, **CHECK CANOPY AND GAIN CANOPY CONTROL**. When jumping the T-10 series parachute, reach up to the elbow locked position and secure a set of risers in each hand, simultaneously conduct a 360-degree check of your canopy. When jumping the MC-6 series parachute, secure a toggle in each hand and pull them down to eye level, simultaneously conducting a 360-degree check of your canopy. If, during your second point of performance, you find that you have twists, reach up and grasp a set of risers with each hand, thumbs down, knuckles to the rear. Pull the risers apart and begin a vigorous bicycling motion. When the last twist comes out, immediately check canopy and gain canopy control.

Your third point of performance is **KEEP A SHARP LOOKOUT DURING YOUR ENTIRE DESCENT**. Remember the three rules of the air and repeat them after me. **Always look before you slip/turn; always slip/turn in the opposite direction to avoid collisions, and the lower jumper always has the right of way**. Avoid fellow jumpers all the way to the ground and maintain a 25-foot separation when jumping the T-10 series parachute and a 50-foot separation when jumping the MC-6 series parachute. Sometime during your third point of performance, release all appropriate equipment tie downs.

This brings you to your fourth point of performance, which is **PREPARE TO LAND**. At 100-200 feet AGL, look below you to ensure there are no fellow jumpers and lower your equipment. Regain canopy control. At approximately 100 feet AGL, slip/turn into the wind and assume a landing attitude. When jumping the T-10 series parachute and the wind is blowing from your left, reach up on left set of risers and pull them deep into your chest. If the wind is blowing from your front, reach up on the front set of risers and pull them deep into your chest. If the wind is blowing from your right, reach up on your right set of risers and pull them deep into your chest. If the wind is blowing from your rear, reach up on your rear set of risers and pull them deep into your chest. After you have slipped into the wind, you will assume a landing attitude by keeping your feet and knees together, knees slightly bent, with your head and eyes on the horizon.

When jumping the MC-6 series parachute at approximately 250 feet AGL, determine your direction of drift. If the wind is blowing from your left, pull your left toggle down. When you are facing into the wind let up slowly to prevent oscillation. If the wind is blowing from your right, pull your right toggle down. When you are facing into the wind let slowly to prevent oscillation. If the wind is blowing from your rear, pull either toggle down. When you are facing into the wind let slowly to prevent oscillation. If the wind is blowing to your front, make minor corrections to remain facing into the wind. Look below you to ensure there are no fellow jumpers. Transfer control of one toggle to the opposite hand, so that one hand is controlling both toggles. With the free hand release all appropriate equipment tie downs and lower your combat equipment. Now regain canopy control with both hands. Assume a proper prepare to land attitude by pulling the toggles to the appropriate break position. Keep your feet and knees together, knees slightly bent, elbows rotated in toward your side, with your head and eyes on the horizon.

When the balls of your feet make contact with the ground, you will go into your fifth point of performance, **LAND**. You will make a proper PLF by hitting all five points of contact. Touch them and repeat them after me**. 1) BALLS OF THE FEET. 2) CALF. 3) THIGH. 4) BUTTOCKS. 5) PULL UP MUSCLE.** You will never attempt to make a stand up landing.

Remain on your back and activate one of your canopy release assemblies using either the hand to shoulder method or the hand assist method. To activate your canopy release assembly using the hand to shoulder method, with either hand reach up and secure a safety clip and pull it out and down exposing the cable loop. Insert the thumb from bottom to top through the cable loop, turn your head in the opposite direction and pull out and down on the cable loop. To activate the canopy release assembly using the hand assist method, with either hand reach up and secure a safety clip and pull it out and down exposing the cable loop. Insert the thumb from bottom to top. Re-enforce that hand with the other hand, turn your head in the opposite direction and pull out and down on the cable loop. If your canopy fails to deflate, activate the other canopy release assembly. Place your weapon into operation and remain on your back to get out of the parachute harness.

I will now cover **RECOVERY OF EQUIPMENT**.

Once out of the parachute harness, remove all air items from the parachute harness. Roll the aviator's kit bag two thirds of the way down and place the parachute harness inside the aviator's kit bag with the smooth side facing up, leaving the waistband exposed. Remain on a knee and begin pulling the suspension lines and canopy to the aviator's kit bag, stuffing them in as you go. Route the waistband through the bridal loop leaving six to eight inches of the waistband exposed and snap, do not zip, the aviator's kit bag. Secure the reserve parachute to the aviator's kit bag, place it over your head, conduct a 360-degree police of your area and locate the nearest turn in point and move out to it.

I will now cover **TOWED JUMPER PROCEDURES.**

**"JUMPERS HIT IT."** If you become a towed jumper and are being towed by your universal static line and are unconscious, you will be retrieved inside the aircraft. If you are conscious, maintain a good tight body position with your left hand on the end of the reserve and with your right hand cover the ripcord protector flap, with your right forearm on the ripcord grip/ripcord handle, and an attempt will be made to retrieve you inside the aircraft.

As you near the jump door, **DO NOT REACH FOR US,** continue to protect your ripcord grip/ripcord handle. If you cannot be retrieved, you will be cut free. Once you feel yourself falling free from the aircraft, immediately activate your reserve parachute for a total malfunction.

If you are being towed by your equipment, regardless of whether you are conscious or unconscious, we will cut or jog your equipment free and your main parachute will deploy.

**<u>NOTE</u>: If you are being towed from a rotary wing aircraft, maintain a good tight body position and protect your ripcord grip/rip cord handle. The aircraft will slowly descend to the DZ, come to a hover and the jumpmaster will free you from the aircraft.**

The next item I will cover is **MALFUNCTIONS**

There are two types of malfunctions, total and partial. A total malfunction provides no lift capability what so ever; therefore, you must activate your reserve using the **PULL DROP METHOD**. While cigarette rolls and streamers are partial malfunctions, they provide no lift capability and you must activate your reserve using the **PULL DROP METHOD**.

There are several types of partial malfunctions and actions for each. If you have a squid, semi-inversion, or a complete inversion with damage to the canopy or suspension lines you must immediately activate your reserve for a partial malfunction. If you have a complete inversion with no damage to the canopy or suspension lines, do not activate your reserve parachute.

If you have broken suspension lines, blown sections or gores, compare your rate of descent with fellow jumpers. If you are falling faster than fellow jumpers, activate your reserve for a partial malfunction.

I will now cover **ACTIVATION OF THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM SOFT LOOP CENTER PULL**.

To activate the **MIRPS SLCP;** you will use the **"PULL DROP METHOD." "JUMPERS HIT IT."** Maintain a good tight body position. Grasp the left carrying handle with your left hand; with your right hand grasp the ripcord grip. Turn your head and eyes in either direction and pull up and out on the ripcord grip and drop it. Your reserve will activate.

I will now cover **ACTIVATION OF THE T-11 RESERVE PARACHUTE SYSTEM.**

To activate the **T-11;** you will use the **"PULL DROP METHOD." "JUMPERS HIT IT."** Maintain a good tight body position. With either hand grasp the ripcord handle. Throw your head back and to the rear and pull out on the ripcord handle and drop it. Your reserve will activate.

**<u>NOTE</u>: If you have to activate the MIRP (SLCP)/T-11R for a partial malfunction, any attempt to control either canopy will be useless as one canopy will act as a brake for the other. When activating the T-11 Reserve for a total malfunction, let up on the risers for the reserve. Pull a good two riser slip opposite your direction of drift during your fourth point of performance.**

The next items I will cover are **COLLISIONS AND ENTANGLEMENTS**.

**"JUMPERS HIT IT. CHECK CANOPY AND GAIN CANOPY CONTROL."** If you see another jumper approaching, immediately attempt to slip/turn away. If you cannot avoid the collision assume a spread eagle position and attempt to bounce off the other jumper's canopy and suspension lines and immediately slip/turn away. If you should enter the other jumper's suspension lines, snap into a modified position of attention. With either hand protect your ripcord grip/rip cord handle and with your other hand attempt to weave your way out of the suspension lines the same way you entered and then slip/turn away.

If you become entangled and are jumping the T-10 series parachute, the higher jumper will climb down to the lower jumper using the hand under hand method. Once both jumpers are even, you will face each other and grasp each other's left main lift web with your left hand. Both jumpers will discuss which PLF to execute. Both jumpers will conduct the same PLF. Neither jumper will execute a front PLF. Both jumpers will continue to observe their canopies. If one canopy collapses, neither jumper will activate their reserve as one T-10 series parachute can safely deliver two combat equipped jumpers to the ground. If both canopies collapse the jumpers will pull towards each other to create a clear path for the activation of their reserve parachutes, and then activate their reserves using the pull drop method.

If you are jumping the MC-6 series parachute, both jumpers will remain where they are, obtain a clear and unobstructed path and immediately activate their reserve parachutes using the **PULL DROP METHOD**.

The next items I will cover are **EMERGENCY LANDINGS**.

The first emergency landing I will cover is the Tree Landing. If you are drifting towards the trees, immediately slip/turn away. If you cannot avoid the trees and have lowered you equipment, look below you to ensure there are no fellow jumpers and jettison your equipment making a mental note of where it lands. If you have not lowered your equipment, keep it on you to provide extra protection while passing through the trees. At approximately 100 feet AGL, assume a landing attitude by keeping your feet and knees together, knees slightly bent with your head and eyes on the horizon. When the balls of your feet make contact with the trees, rotate your hands in front of your face with your elbows high. Be prepared to execute a PLF if you pass through the trees.

If you get hung up in the trees maintain your advanced combat helmet and lower and jettison all unneeded equipment. Activate the chest strap ejector snap and activate the quick release in your waistband. Place your left hand over the ripcord protector flap and apply pressure. Grasp the ripcord grip with your right hand and pull it and drop it. Control the activation of the reserve parachute toward the ground ensuring that all suspension lines are completely deployed. Disconnect the left connector snap and rotate the reserve to the right. Grasp the main lift web with either hand below the canopy release assembly and with the other hand activate the leg strap ejector snaps and climb down the outside of the reserve. If you are jumping the MC-6 and get hung up in the trees keep your advanced combat helmet on and jettison all unneeded equipment. Activate the quick release in the chest strap and the waistband. Ensure you have a clear and unobstructed path to activate your reserve. First remove the top tuck tab and insert either hand from top to bottom behind the rip cord handle and apply steady inward pressure. With the opposite hand grasp the soft handle, pull and drop it. Now control the activation of the reserve all the way to the ground. Ensure all canopy and suspension lines are free of the pack tray, and the reserve reaches close enough to the ground for you to safely climb down. **Disconnect the left connector snap from the left D ring, and reattach it to the right Triangle Link.** Seat yourself will into the saddle and grasp the main lift web with either hand below the canopy release assembly. With the other hand activate the leg strap ejector snaps and climb down the outside of the reserve. Remember, when in doubt, stay where you are and wait for assistance.

(**Note:** The T-11 reserve suspension lines have a protective coating and are very slippery. Extra care must be taken when climbing down.)

The next emergency landing I will cover is the Wire Landing. If you are drifting toward wires, immediately slip/turn away. If you cannot avoid the wires, look below you to ensure there are no fellow jumpers and lower and jettison your equipment making a mental note of where it lands. Assume a landing attitude by placing your hands, fingers and thumbs extended and joined high on the inside of the front set of risers with the elbows locked. Place your chin on your chest, keep your feet and knees together and exaggerate the bend in your knees. When the balls of your feet make contact with the wires, begin a vigorous rocking motion in an attempt to pass all the way through the wires. Be prepared to execute a PLF if you pass all the way through the wires. If you get hung up in the wires, stay where you are and wait for assistance.

The last emergency landing I will cover is the Water Landing. The water landing is the most dangerous emergency landing because it takes the most time to prepare for. If you are drifting towards a body of water, immediately slip/turn away. If you cannot avoid the water, look below you to ensure there are no fellow jumpers and lower; do not jettison your equipment. Next, jettison your Advanced Combat Helmet. Activate the quick release in your waistband, disconnect the left connector snap and rotate the reserve to the right. When jumping the MC-6 series parachute activate the quick release in the chest strap and waistband, disconnect the left connector snap and rotate the reserve to the right. Seat yourself well into the saddle and activate the chest strap ejector snap. Regain canopy control. Prior to entering the water assume a landing attitude by keeping your feet and knees together, knees slightly bent and place your hands on the leg strap ejector snaps. When the balls of your feet make contact with the water, activate the leg strap ejector snaps, arch your back, throw your arms above your head and slide out of the parachute harness. Swim upwind or upstream away from the canopy. Be prepared to execute a PLF if the water is shallow. If the canopy comes down on top of you locate a radial tape, follow it to the skirt of the canopy and swim upstream or upwind away from the canopy.

The next items I will discuss are **MISSION ORIENTED** items.

Since intentional water landings, night operations and operations under AWADS conditions require additional considerations, you must be prepared to brief them to your jumpers.

**<u>NOTE</u>: If you are jumping the B-7 life preserver, activate it in the air. Lower but do not jettison combat equipment.**

**NIGHT JUMPS:** When conducting night jumps, be sure to give your canopy an extra look, and maintain noise and light discipline all the way to the ground.

**AWADS:** When jumping under AWADS conditions, do not lower your equipment until you have passed through the clouds. Do not slip/turn unless you have to avoid a collision. If you have any type of malfunction, you must immediately activate your reserve using the pull drop method because you cannot compare your rate of descent with fellow jumpers. Ensure you recheck your canopy once you pass through the clouds.

**PLF'S:** We will now move to the PLF platform and conduct one satisfactory PLF in each of the four directions ensuring you conduct a proper PLF.

**ITEMS TO BE COVERED DURING PRE-JUMP TRAINING**

MOD #1 1. FIVE POINTS OF PERFORMANCE

MOD #2 2. RECOVER OF EQUIPMENT
3. TOWED JUMPERS PROCEDURES
4. MALFUNCTIONS
   a. ACTIVATION OF RESERVE
5. COLLISIONS AND ENTANGLEMENTS

MOD #3 6. EMERGENCY LANDINGS:
   a. TREE LANDING
   b. WIRE LANDING
   c. WATER LANDING
7. MISSION ORIENTED ITEMS
   a. B-7 LIFE PRESERVER
   b. NIGHT JUMPS
   c. AWADS
8. PARACHUTE LANDING FALLS